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ORIGINAL ARTICLES.

ETHER ANÆSTHESIA.

Read before the Kings County Medical Association, February 9, 1892.

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Mr. President and Members of the Kings County Medical Association:—It is provided by the by-laws of this Association that "at the February meeting each year the nine o'clock hour shall be devoted to an address from the president of the preceding year, upon the progress made during the year in that branch of the medical art or science in which he may have been specially interested." It is therefore in accordance with a free interpretation of the above by-law that a paper is presented for your consideration on the subject of ether anæsthesia, which may properly be classed among the medical arts; but, if I confined myself to the strict letter of the law, it is quite certain that I shall fail to present anything that can properly be considered to represent progress made during the year. It is not always certain at the close of a year what progress has really been made in medicine. Long and varied trials are necessary before theories are established and become the facts of medical science; and many a claim that starts out under favoring breezes is lost in transit or wrecked before reaching its destined haven. Cocaine and tuberculin are fresh and striking examples of the necessity for delay in pronouncing the final verdict on such claims, and illustrate what time will do to make or mar the reputation of men and methods. So, I venture to express in the following pages some thoughts that are the outcome of clinical experience extending over a number of years in the administration of ether as an anæsthetic; some of them have reached the voting age, and some are still minors. Many of them are firmly fixed in my mind and not lightly to be abandoned; others are offered with a certain amount of hesitancy; but all, I trust, subject to the changes that may be produced by larger experiences, either of my own or of others.

The subject of ether anæsthesia is chosen because it seems to furnish a topic of interest to every member of the profession and concerns the medical as well as the surgical practitioner, although not to the same extent, and in the presentation of the subject I do not desire to make a comparison between ether and other anæsthetics, interesting as that might be, nor to inflict on your patience statistical tables, however valuable they might be; but to present what my experience has forced upon me concerning the disagreeable symptoms and conditions, that may arise during its administration, the alleged dangers of ether anæsthesia and the methods that have been found useful as well as some that have been found useless in either preventing or relieving these dangers or disagreeable conditions, and the paper will fall far short of accomplishing its object if it is considered simply as a formal address not to be discussed or commented upon. I trust it may, like any paper presented to the Association, elicit the expression of the experiences of the members of the Association, whether they are in harmony with those of the writer or at variance with them. The disagreeable symptoms that may arise during the administration of ether may be referred mostly to the stomach, the respiratory tract, the brain and nervous systems, and the heart; while the dangerous symptoms are traceable to the effect of the anæsthetic, either immediate or remote, on the brain, the heart, the stomach and the kidneys. I feel quite certain that with the proper preparation of the patient and an intelligent use of the anæsthetic, both the unpleasant symptoms and the real dangers of ether anæsthesia may be avoided in the large proportion of cases, and it will be quite exceptional to be annoyed by the former, or made anxious concerning the patient's recovery by the presence of the latter.

When proper precautions are not taken in the preparation of the patient, and especially when the anæsthetic is administered by one who is not familiar with its effects, it makes an onlooker pause in expressing the belief that anæsthesia is the greatest boon conferred on mankind during the present century; but on the other hand, when proper preliminary measures have been carried out and the administrator is one, who, by experience, has been taught the many tricks that ether plays, and still better how to avoid them, we may surely endorse every claim that is made for it, and rejoice in its gentle and potent aid.

Not a little importance should be attached, I think, to the preparation, where time admits, of the patient for a day before the operation to secure control of the quantity and variety of food the patient should take, to see that the bowels are moved by enema, or by more active measures where the tongue is loaded and the liver inactive. In private practice this is usually not difficult; but among dispensary patients, particularly those who, to save time, desire to enter the hospital on the day of the operation, it is especially important. The most careful directions in regard to food and medicine will oftentimes be entirely forgotten or ignored, and the penalty is paid in stomach irritation at times prolonged and distressing. It is always best in these cases, to insist on the patients entering the hospital in the evening of the day preceding the day of operation, and thus secure the carrying out of the directions given. A mild laxative, like fluid extract of Buckthorn, comp. licorice powder, etc., is sufficient except in cases where the bowels are to be kept quiet for several days after the operation, when a more active cathartic is needed. In cases of nervous or apprehensive patients a quieting dose of one of the bromides,

chloral, sulfonal somnal, etc., rarely opium, renders the nervous system more comfortably tolerant of the anæsthetic. An easily digested breakfast on the day of operation, and a bowl of broth two or three hours before the administration of the ether has seemed to me the best way to treat the stomach. I think all agree that the stomach should be empty at the time of the operation, but I am persuaded that a too prolonged fast is undesirable, and renders the stomach irritable rather than the reverse. In very nervous patients it seems to me well to make even the breakfast of the day of operation consist of fluid alone, a bowl of coffee or strong broth preferably; for the need of this unusual care in such cases finds striking illustration in the vomiting of solid food during anæsthesia that had been taken as much as twelve hours before the operation, and that had been retained in the stomach only partly, if at all, digested.

Beyond the measures above indicated my own experience has not encouraged me to go in the general preparation of the patient for avoiding the objections to ether. Many years ago I tried in a pretty large number of cases, moderately large doses of the bromides from an hour to twenty-four hours before the administration of the ether with the idea specially of preventing vomiting, but failed to find any beneficial results from their administration. Chloral also produced negative results in my hands. With these preliminary measures attended to, I have learned to feel that the most important thing I could do for my patient is to administer five or six minims of Magendie's solution of morphia with from $\frac{1}{150}$ to $\frac{1}{60}$ of a grain of sulphate of atropia hypodermically one hour before the ether is administered; a smaller dose of the opiate, of course, should be given to children, but the dose of atropia had better not be diminished. A larger dose of Magendie's solution, twelve to fifteen minims as has been recommended, is not only unnecessarily large, but dangerous. This use of morphia and atropia has many advantages; it quiets nervous excitement, it renders the patient more susceptible to the ether, it lessens the liability to vomiting, it saves ether, it controls the pain that the patient is liable to suffer after the operation, it counteracts the heart depression of the prolonged use of ether, it prevents in part free and exhausting perspiration and keeps the pharynx, larynx and bronchial mucous membrane from pouring out mucus to nauseate or choke the patient, and to overload his lungs and thus interfere immediately with the proper aeration of the blood, and to increase what some authorities consider one of the dangers of ether, namely, pneumonia. No originality, of course, is claimed for this use of morphia and atropia, for it is not infrequently employed; but it seems to me that insufficient emphasis has been laid on its value. Several years since a child about six of age had given to it by mistake a half grain instead of $\frac{1}{120}$ of a grain hypodermically before a slight operation on the leg—curetting carious bone, I believe. No morphia was used in this case. Not until an hour or two after the effects of the ether had passed off did the symptoms of belladonna poisoning manifest themselves. They were characteristic, were marked and passed off in six or eight hours. The child did not die. Making all allowance for the tolerance of belladonna in children, I am persuaded that the ether had to do with counteracting the effects of what might and probably would have been a lethal dose of the drug. Is it not reasonable to think that atropia may, partly in its physiological action and partly in a way that we cannot fully explain, act in such a way as to diminish, if present, the unpleasant and dangerous effects of ether?

In regard to the use of alcoholic stimulants immediately preceding the administration of ether, it has always seemed to me to be contra-indicated. In the face of common practice I make this statement with some hesitation, and yet in persons who are not in the habit of using alcohol it has seemed to me to add to the risk of nausea and vomiting, and both in these cases and in users of alcohol to prolong the first or so-called stage of excitement. If anything is needed in addition to the morphia and atropia, I think we have it in the anæsthetic itself which, if not carried too far or used too long, is more efficient than alcohol in its cardiac stimulating effects. Indeed, there is not wanting authority for the belief that in the later stages of ether depression, alcohol only adds to the danger of cardiac weakness.

It is hardly necessary to state that artificial teeth, tobacco, pins, etc., should be removed from the mouth before the anæsthetic is given, and that the clothing about the chest should be loose enough to allow of the freest expansion of the chest in respiratory movements, that the ether should, as a rule, be administered with the patient out of the sight of the instruments to be used, and that the anæsthesia should be complete before the operation is begun; a primary incision before this stage is reached will have the effect of rousing the patient, as sudden fright will sober a drunken man, and the same effect will follow even moderate talking during the first stage of ether sleep. It is always wise to tell the patient of the primary unpleasant sensations he may experience, the, to many, disagreeable odor, the coughing, the sense of choking, the disposition to pull the inhaler from the mouth, the increased heart action, and also to assure him of his safety and that by exercising his self-control he can materially assist the surgeon and quietly pass into a state of comfortable sleep. If at the same time the patient is allowed to take the ether can or bottle between his hands and breathe the ether vapor for a moment or two before the inhaler is placed over the face he becomes accustomed to the odor and the effect on his breathing, and the ether produces a not inappreciable degree of pharyngeal anæsthesia. These preliminary points, that seem perhaps tiresome in the hearing, are mentioned as more or less important in bringing a patient under the influence of ether with the least risk to him and the least discomfort to himself and the anæsthetizer. It is hardly necessary to say that all these means may be and, in emergency cases and among children, often many of them must be neglected and still the patient is brought under the influence of the anæsthetic. The point under consideration is not whether unconsciousness can be produced with ether, nor how quickly, but how best as regards the patient's comfort and safety. As to the inhaler that shall be used, I think it makes very little difference whether a simple cone made of a towel or newspaper and a few pins or a more complicated and expensive apparatus is employed, provided an experienced hand and brain have control of it, and this experience we should always try to secure, and if the experienced anæsthetizer is at the same time the family physician, which is not infrequently the case, the surgeon and patient are both fortunate. The

numerous ether inhalers all have their advantages in economy of ether used, in allowing entrance of air in given and regular amounts, in excluding air, almost altogether, in cleanliness, in securing freedom from a sense of suffocation that is associated with the use of some of the various inhalers, in lowering the temperature of the ether vapor and thus rendering it less irritating, in rapidity of effect, etc; but all of these, with the exception of modifying the temperature of the ether, may be secured with the cone. And how far the vapor is cooled in instruments devised for this purpose seems to me still a matter of doubt if we look for results based on actual thermometric records. The anæsthetic should be administered not too rapidly; ten minutes is a fair average allowance. To hurry it seems to me a mistake; it is unwise, therefore, to insist on the patients breathing rapidly, or to cough violently, etc., undoubtedly deep breathing that goes on easily or is secured when the patient is disposed to hold his breath, taking the cone entirely away from the face two or three times in the first minute or two, will enable the patient to get the air that he feels he needs, and will save him from the struggling, and sense of suffocation and cyanosis that are so frequent when the anæsthetic is administered too rapidly. Given in this way it has been the rare exception that I have not in private practice been able to put the patient to sleep without struggle and with the minimum amount of discomfort. When surgery of necessity prolongs many modern operations to two hours or more in their performance, we may well allow the patient four or five more minutes than are absolutely necessary for complete anæsthesia, to secure the added comfort in coming and perhaps staying under its influence. I am free to say, however, that in hospital practice, when many of the cases are either under the influence of alcohol at the time of the operation, or which is worse, are chronic abusers of alcohol, it is often difficult to secure a satisfactory anæsthesia without using a good deal of physical restraint, at times almost suggesting "crowner's quest"—six on the body. But I can also state that even in these cases I have never had a patient whom I could not anæsthetize with ether. It would be an absurd claim to make that such cases do not exist; I am only stating my own experience, at the same time saying that I have seen ether abandoned when it appeared to me with proper care it might, and probably would have succeeded.

With the patient under the anæsthetic even with all the precautions mentioned, certain accidents may occur; the tongue may, by falling back, interfere with respiration; this may be overcome by turning the head to one side and pushing the lower jaw forward with the finger behind the angle of the jaw and thus avoid the removal of the inhaler which renders the patient liable to come partially out from the ether, and injuring the tongue, by applying forceps to it in order to draw it forward. The ease with which this difficulty is overcome indicates that the trouble is due to a paralysis rather than a spasm of the muscles. The evidence of complete anæsthesia for ordinary operations is the insensitiveness of the cornea to the touch of the finger; but when the parts about the perineum are the seat of operation a more profound anæsthesia must be produced. The anæsthetizer will always bear in mind the greater weight of ether vapor than air, and its inflammability, especially at night operations, or when the cautery is to be used.

Vomiting is one of the disagreeable effects of ether. If it is administered in the manner suggested in this paper it is in my experience exceptional to meet this symptom. It depends sometimes on too rapid anæsthesia, on our inability to prepare the patient for the operation, on alcoholism, acute or chronic, on motion of patient's body in applying dressings. It is best relieved by a little more ether, and firm pressure over the epigastrium has been found useful. When it occurs after the patient is regaining or has regained consciousness it is likely to be associated with or caused by other nervous manifestations such as laughing, crying, etc., and has been controlled best by hot water internally, small doses of cocaine, ice, champagne, and the many anti-emetics in use are more or less successful. By straining, vomiting may be productive of harm in disturbing the relation of wound flaps, and by vascular tension giving rise to hæmorrhage from vessels imperfectly blocked up. I can quote no statistic as to the exact per centage of cases in my own experience in which vomiting occurs, but I feel sure that ten per cent., taking all cases, would be a generous allowance. The other disagreeable conditions that arise during the etherization may be considered to a very large extent preventible symptoms, and dependent either on the patient's state or some fault in the administration of the anæsthetic.

Beside the symptoms already detailed that may arise, we have certain conditions in the lungs, heart and kidneys that necessitate the exercise of very unusual care in the employment of ether, although they have not led me in more than one case to abandon the use of ether for other anæsthetics. That case was one of high amputation of the thigh in a very weak boy with compound fracture of femur and prolonged suppuration. Nitrous oxide was used with entire success; but subsequent experience in similar cases has led me to feel that ether could have been safely used in this boy's case.

The patient is always entitled to a careful examination of the lungs, heart and kidneys, before the use of ether is decided upon, and if it is employed when these organs are diseased, its action should be most carefully watched, especial attention being directed to the avoidance of venous engorgement, so often produced in the early stage of anæsthesia. I have been obliged to employ ether in cases of old persons with emphysema and with chronic bronchitis, they having taken the ether moderately, fifteen or twenty minutes being consumed sometimes before the necessary effect has been produced. In a few cases of phthisis in the early stage I have employed ether without bad results, and when these cases are sent purposely to breathe the cold winter air of some of our consumption cures, and do so with benefit, we may hesitate to believe that the temperature of ether vapor in itself is responsible for inflammatory troubles that develop in the lung, in the small number of cases where these results follow the use of the anæsthetic. Surgical pneumonia is a thing to be dreaded, but more exact experience is desirable in reaching a conclusion as to the relative importance of the anæsthetic and the operation itself in producing the inflammatory trouble; and the traumatism present in many cases where no operation is performed and no ether given, must be credited with bearing a causal relation to the lung inflammation. Cases of fracture of the larger bones in elderly people furnish illustrations of pneumonia due in some

way to the patient's original injury. And furthermore, if the anæsthetic is to be made responsible for a pneumonia following its use, the inflammation ought to follow promptly the use of the anæsthetic, and not be attributed to it when the patient is for two or three days free from any pulmonary symptoms.

In considering the cardiac conditions that call for unusual care in giving ether, it has seemed to me that the right heart needs especial watching, that it does not become overloaded. It has been a common experience to have a weak pulse grow fuller, and in a few instances an irregular one to become regular, under the inhalation of ether vapor, and to have thus a feeble heart benefited by its use. I never have had occasion to use ether in a case of aortic aneurism, but in aneurisms in other parts of the body, abdominal, carotid and popliteal, it has not produced any increased tension that has been appreciable to the rough test of the hand. It is quite easy to believe that with the sac worn very thin, it might be the exciting cause of a rupture, with its rapidly disastrous results.

We are more apt to ignore the kidneys than the heart and lungs in reference to the propriety of administering ether; but their condition is not less important, perhaps. Some surgeons even are on record as stating that ether as an anæsthetic should not be used in cases of even suspected acute or chronic nephritis, and that ether is contraindicated in all affections that impair the integrity of the renal function. As I have already stated, the urine should be examined not only for albumin, but a *complete* examination made of it, including the test for urea. In one case of pregnancy operated upon by me, with slight amount of albumin present, an operation lasting half an hour was followed by no untoward symptoms. In several cases where the renal symptoms indicated the presence of a cirrhotic kidney, no bad effects followed the use of the ether. Beyond this my experience does not go. I never have had occasion to operate upon a patient with badly crippled renal action, and I will be pardoned, therefore, if I quote somewhat freely from a paper read before the New York Surgical Society by Dr. R. F. Weir, January 8, 1890, entitled "Does Ether Anæsthesia injuriously Affect the Kidneys?" In support of an affirmative answer to this question may be cited the opinion expressed by Dr. D. A. Emmet, that "to the effects of the anæsthetic I attribute the chief danger attending the operation (cystotomy) in the advanced stages of the disease, while, on account of the irritability of the bladder, its use is indispensable. As the kidneys are barely able to perform their function sufficiently well to preserve life, the balance is easily lost in the attempt at elimination, and death from uræmia rapidly takes place."

A case is reported of amputation of arm, where heart failure showed itself after a few inhalations of ether, and operation finished without anæsthetic. Fever and delirium in a few days; death in two weeks without any ante-mortem urinary examination. Acute fatty degeneration of kidneys found post-mortem. Query, Was not this ether effects? Dr. Weir's comment is that the cause of death was septicæmia, and not ether.

Another case is reported of cataract operation in a child under ether. Convulsions two hours after operation, coma and death two hours later. After death intense congestion and parenchymatous and fatty degeneration of kidneys found.

Some kidney changes found post-mortem in another cataract operation under ether. Albumin not discovered until seventeen days afterward, with granular and fatty casts. Death on eighteenth day. Two post-mortems reported by the late Wesley M. Carpenter, of extensive kidney lesions, one case of recto-vaginal fistula, death on table just before completion of operation, heart not examined; the other, character of operation not stated, death eight hours afterward, patient going to water-closet, breathing stertorously, where, beside kidney lesion, marked mitral disease and decided atrophy of right ventricle were found.

Another case with normal kidneys had uterus curetted, no bad results; a year later, with previous evidence of slight catarrhal nephritis, curetting repeated under ether. Collapse in twenty-four hours, scanty urine, albumin abundant, hyaline, bloody and granular casts in abundance. Temperature not given, and the renal trouble attributed in good part by the writer to septic processes.

On the other hand, as favoring a negative reply to the question that forms the title of Dr. Weir's paper, are the following conclusions of Dr. Feutin, of Berne, based upon his experiments on animals and upon 150 cases wherein ether was given, the time noted, and the amount consumed:

1. That ether has no perceptible effect upon the healthy kidneys of animals—who, moreover, are more susceptible than mankind to its influence.

2. That it is not dangerous in persons whose kidneys are slightly diseased.

3. That subsequent disturbances of circulation in the kidney, when met with, are very transitory and rapidly disappear.

4. That the presence of abnormal urinary ingredients is not a positive counter-indication for the use of ether.

Added to this is Dr. Weir's own experience as quoted in part below:

"In thirty-four cases where albumin was not found prior to the performance of an operation which excluded the abdominal or genito-urinary regions, in nine there was, after the operation, a trace of albumin to be found which was of a transitory nature, and in twenty-five there was no change whatever, chemically or microscopically, in the urinary secretion.

"In further analyzing my cases, I find that in five patients evidences of a diseased kidney existed prior to the operation, but the albumin was not increased afterward in three of these, but was increased to a slight extent in two, without the development of unpleasant symptoms. In four of the patients, in whom no albumin existed previous to the operation, and in whom it was found in small amount after the operation, there was associated with this symptom a few blood cells, renal epithelium, a few hyaline casts, and an occasional leucocyte. These were also of but short duration.

"The whole outcome of this limited series of observations is not to belittle the risks that patients with much damaged kidneys run in the course of an operation, but rather to direct more clearly our attention to efforts to neutralize these dangers. While I myself do not know of any efficient means of preparing a damaged kidney to undertake the greater work that may be thrown upon it by a febrile action in the system, yet in such instances I do take greater

care to avoid the influences of exposure and cold, and am more particular to direct that ether should be so given as to avoid the venous congestions that are so frequently observed during the careless administration of this anæsthetic. I am unwilling in these cases to prolong the abstention from fluids, and, when so forced to do under the irritation of the stomach, resort early and often to large hot-water injections into the rectum, and above all—and this has has been the aim of this discursive paper—I feel that attention should be stringently directed to the most careful carrying out of the antiseptic treatment. And in many instances of this class of patients, rather than run the risk that often occurs from defective drainage (and I believe that drainage is more often carried out by the outside of a tube than by its quickly choked-up lumen, and is therefore many times imperfectly carried out), I prefer to let such wounds be packed with an antiseptic gauze and allowed, where possible, to heal up from the bottom.

"In the few instancs that I can recall of marked renal complications following the administration of ether, the operation has been performed in portions of the body where sepsis is most likely to occur and where it is most difficult to guard against it—to wit, the rectum and the mouth."

A single thought may be added, in conclusion, in regard to the mortality from ether. One of the strongest points in favor of ether as an anæsthetic, has been its safety. Not that it may not kill when used carelessly, or even with the greatest care; but, making all due allowance for the possible danger of the anæsthetic state however produced, ether has still justly claimed for it a large measure of safety. One death in 23,204 cases is a very low mortality, and this ratio represents, as accurately as may be by figures alone, the death-rate from ether. It has never been my bad fortune to lose a patient from the effects of ether. And yet this unqualified statement should not be made. Those who advocate the use of ether as an anæsthetic maintain that the deaths due to ether do not, as a rule, occur with the patient on the operating table, but that the pneumonia or bronchitis, or renal disturbance that finally carries the patient off, may be traced back to the anæsthetic. But inasmuch as these same visceral changes are produced by septic influences connected with the operations performed under ether, there will still remain a doubt in the minds of all advocates of ether, as to the relative part played by the ether and the operation in the fatal result. And a profitable study of statistics relating to alleged ether deaths might put the profession in a better position to defend or refute the charge that ether is not so safe an anæsthetic as most surgeons are disposed to believe.

SOCIAL SCIENCE PROBLEMS OF INEBRIETY.

Read before the Social Science Association, Saratoga, N. Y.

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Notwithstanding all the advances of civilization and intelligence, and the increasing temperance agitation, and effort, the drink evil, or inebriety, is one of the most threatening ominous perils to all social progress and development of to-day.

Some idea of its extent may be obtained from the following statistics. In 1890 over half a million persons were arrested in this country charged with being drunk and disorderly, crazed from the effects of alcohol. Nearly twenty per cent. had committed crime of petty character while under the influence of spirits.

These facts furnish some approximate estimate of the extent of inebriety in this country. It is reasonable to infer that if half a million inebriates have come under police surveillance in one year, at least a third of this number using alcohol to excess, have escaped legal notice.

The statement that there are fully a million persons in this country who are, continuously or at intervals, using alcohol and opium to excess and poisoning themselves is not an extravagant or improbable one.

Of course the mortality from this, both directly and indirectly, is excessive, and the oft repeated assertion of sixty and a hundred thousand deaths a year from alcohol, is after all, only a minimum statement.

Practically this vast army of inebriates are withdrawn from the ranks of active workers and producers, and become burdens and obstacles to all healthy living and progressive development.

Yet literally this army and its excessive fatality would be insignificant compared with the injuries and losses which follow.

These cases are always centers of pauperism both to themselves and family. Often they form centers of criminality, and in all cases cultivate the most unsanitary conditions of life and surroundings. They are actually *foci* from which spring all forms of degenerations, and bad influences, and streams of heredity that are terrible in their power in the next generation. If this drink evil could be limited to the victim, the presence of a million inebriates with a mortality of forty or fifty per cent. would be less terrible.

Literally, every inebriate, if married, pauperizes his family in some degree, entails on his children tides of degeneration, periling their future physically, mentally and morally. If a single man, he cultivates conditions of degeneration which affect all who come in contact with him. He encourages unsanitary and psychological states that are the opposite of healthy growth and living.

If he occupies prominence in society and has influence and money, the insanity of his inebriety antagonizes everything that is rational and sanitary.

The great question to-day is not so much the cure of this army, or the checking of its mortality, but of prevention, from a knowledge and removal of the causes and conditions which favor its growth and development.

Inebriety in a general sense is a progressive march of dissolution, with constant hints of the possibility of halts and checks, where the march can be stayed, and the causes changed.

Scientific observation of the inebriate made two thousand years ago, and the more accurate studies the last quarter of a century all support one broad conclusion: that inebriety is a disease, with a distinct and complex causation; that this disease follows a regular line of march from the beginning through and development on to decline and extinction. Its magnitude, uniformity and fatality, furnish abundant proof of distinct disease and distinct causation, clearly traceable from accurate study. This great drink problem in 1892 is practically this: Thousands

of persons in all circles of society from the highest to the lowest, are suffering and dying, and vast tides of misery and loss are following. While all the means and measures to check or prevent this evil are utterly inadequate.

Public attention has been confined entirely to means of prevention and cure, and but little study has been made of the causes and conditions. Theories that were urged a thousand years ago, as to the nature and causes of inebriety, are still pressed with vehement earnestness, by reformers, and accepted as final.

In the meantime the world has gone on, and new realms of facts have been discovered, the supernatural and mysterious have narrowed until these terms often express present ignorance. Moral theories of physical phenomena are survivals of superstition.

The purpose of this paper is to point out some of the conclusions towards which scientific study is approaching concerning the causes and remedies of inebriety.

Heredity is found to be one of the most common causes of all inebriety. Over forty per cent. of all cases which have been studied have inebriate parents or grand-parents. Over twenty per cent. have insane, epileptic and mentally defective ancestors, one or two generations back. The commonly observed fact of the transmission to the next generation, of the form and features of the parents, is followed with equal certainty by the reappearance of their diseases. The form and appearance may vary, but the degeneration never. The organic defects of the brain and nervous system go down to the next generation with absolute certainty. The most casual observation of inebriates in high and low life, fully confirms this: these men are freighted with diseased tendencies and impulses, which burst into activity from the slightest exciting causes. They are incapable of bearing the strains and drains of modern civilization and living healthy natural lives. They are the unfit that are "crowded out" in the race.

The possibility of cure and prevention by the application of scientific measures along this line, promise the grandest results. First of all, marriage should be regulated by law, and determined by the family physician from a knowledge of the ancestral and family diseases. The laws of heredity should be studied and applied, from a scientific standpoint, with the same exactness as the sanitary conditions of the home are arranged.

Polluted and poisonous drinking water, bad, dangerous sleeping rooms, poisonous food, and reckless neglect of common sanitary laws, are considered culpable. How much more infinitely dangerous is the marriage of two persons, with an ancestral history of inebriety, insanity and other brain and nerve defects.

It is here that inebriety, insanity, criminality, and pauperism, are bred and cultivated. We preach prohibition, and urge the pledge and prayer as a remedy, and consent and participate in the marriage of persons whose children must inevitably be inebriates, insane and otherwise defective.

Thus the evil we are trying to remove, is bred and cultivated by ignorance and indifference.

A striking illustration is apparent in the children of drinking parents born during the war, especially where the father used spirits and suffered in the army. As a rule, all these children are mental defects, inebriates, criminals, paupers and insane. The use of alcohol and the mental strain in these exciting days has been reflected to the next generation, and literally these descendants have been switched on to the side-track of profound degeneration, and early death.

Every inebriate and insane asylum, and every prison in the country have inmates where heredity is clearly traceable to the excesses of the parents during the war. Heredity is the great fountain head of inebriety, and the only remedy is the regulation of marriages on a scientific basis.

The question of divorce sinks into insignificance compared with dangerous marriages, and yet the latter are practically unregulated.

Bad, unsanitary living, and bad training are common sources from which inebriety springs.

The child who is brought up in the worst sanitary surroundings and defective ventilation, imperfect heat, clothing and food may not be an inebriate, but he has all the physical conditions to find relief in the narcotic effects of alcohol. Every state and condition of life, that lowers the vital forces, and degenerates and perverts the brain and nervous vigor, predisposes and favors the use of any remedy which will bring relief.

Thus the *over fed* and the *under fed* are being trained for inebriety. The abnormal stimulation which comes from nutrient excesses, and the exhaustion which follows from deficient quality and quantity of food, strongly favor the use of spirits for relief. Thus the glutton and the starved become inebriates.

Many cases are cured by changing the nutrition, building up the body, and regulating the food supply.

Bad training and *no training* are also common causes.

Misdirected education, training children out of their natural sphere in life, education that has no reference to the natural capacity of the child, in most cases unfits him for a healthy life. The brain is perverted, its natural capacities are replaced by capricious desires and eccentricities. It becomes enfeebled and exhausted and the use of alcohol follows naturally from the slightest temptation.

The untrained have little power of resistance to the strains incident to the rapid changes and demands on the brain and nervous system. They also find rest and relief from alcohol. *Over work* and *underwork* are also common causes of inebriety, also exhaustion from diseases, from injuries and many other conditions of life, which weaken and break up the controlling centers of the body.

In these and many other cases, inebriety is simply evidence of brain exhaustion and brain defect.

This is apparent from the increase of inebriety which follows wars, famines, disasters, commercial depressions, waves of public sorrow, and events that profoundly impress the public mind.

Inebriety follows closely the movements of society and commerce and the revolutions which spring from new inventions and changes of life and living.

Every advance in the study of the inebriate brings into view new ranges of causes and conditions, which can be remedied, and suggests means and methods of prevention, that are as exact as the march of the seasons.

If the inquiry is turned to the present legal methods of treating inebriety we are confronted by some of the most startling facts.

Of the half a million persons who were arrested

last year for inebriety, not one per cent. were benefited or helped. Over ninety per cent. were made worse and more positive inebriates by this means. The station houses and jails are actually recruiting stations and the armies of inebriates who are forced into them, are formed into legions of incurables which never desert or leave the ranks. Physically, the short imprisonment of the inebriate simply removes him from spirits, and leaves him less capable of living a temperate life. Mentally, he has lost a certain self-respect and pride of character essential for recovery.

The first legal punishment of inebriates is followed by a species of fatality, seen in a repetition of the same offense ever after. This fact is so apparent, that these cases are called "repeaters" in the courts, and the number of sentences to the same man often extends to hundreds. In one thousand cases confined at Blackwell's Island, New York, nine hundred and thirty-five had been sentenced for the same offense, drunkenness, from one to twenty-eight times. The first sentence was a regular switch point from which the victim was precipitated lower and lower, and became more incapacitated for temperate living.

The system of fines is equally ruinous, because it falls most heavily on the family, making it more difficult for them to sustain themselves, increasing the perils of pauperism to both the victim and those who are dependent on him for support.

It may be said, and the statement is sustained by many facts, that the legal treatment of inebriety by the lower courts by fines and imprisonment are equally as fatal and dangerous as the saloon where spirits are sold. The saloon and the police court, are literally the school and college for the training and graduation of an army of incurable inebriates, that peril every sanitary interest of the country.

The fault is not in the courts and its administration of law, but in the law, and public opinion which urges that all inebriates should be treated as wilful criminals, and arrested and punished the same as all criminals.

Thus year after year this terrible farce of prevention of inebriety by fines and short imprisonments goes on, and the incurability of the poor victims increases; crime is increased, pauperism is increased, the most dangerous sanitary conditions are fostered, and the burdens of the producers and taxpayers enlarged.

These are facts supported by abundant testimony.

A Chinese law enacted a thousand years ago contains a flash of truth. When a criminal comes before the courts, careful inquiry is made into his ancestry. If they are found to have any of the traits common to the prisoner, he is killed and they are punished. His death ends all further possibility of transmitted crime, and their punishment and recorded history puts a check to all further propagation of the evil.

If this terrible error of treatment would end with the victim it would be less aggravated, but it cultivates and entails on the surroundings and future, waves of loss and sorrow that are beyond estimate.

While the law is trying to check inebriety by punishment, and the church by conversion, and the moralists by the pledge, science is solving the problem, and pointing out other and clearer methods of cure and prevention.

Already great outline facts are coming up on the horizon, and the dawn of a new era is at hand. Not far away inebriety will be regarded the same as smallpox, and the victim forced to go into quarantine, and be treated until he recovers. Public sentiment will realize that every inebriate is not only diseased but dangerous to society and himself, and will demand that he come under legal restriction and be placed in the best conditions for recovery. The victim will realize that society will not tolerate his presence, or permit him to have personal liberty in this condition, and make an effort to secure aid and help before extreme stages are reached.

Thus the poor man on the street, and the rich man or his son, will come under legal control at the beginning, and be forced into states of healthy living. The one will be saved from becoming a prey on society, and a burden to the tax-payer and producer, and the other from destroying himself and injuring the society he moves in, and leaving a tide of misery and sorrow, that will continue long after.

Take away the personal liberty of the inebriate, or any one who uses spirits to excess, declare him incapable and irresponsible, and a death blow is struck at all centers of pauperism, criminality, and the saloon. Make the saloon-keeper and his property responsible for all the injuries that follow from the sale of spirits, and tax him to support asylums for the inebriate, and the saloon will disappear in obedience to a higher law than any prohibition sentiment.

All inebriates should be put under treatment in workhouse hospitals, built from the license fund, and supported by the labor of its inmates.

Such hospitals should be military training schools, where every surrounding and condition of life can be regulated. Where medical, hygienic, educational, industrial treatment, and training, can be applied to restore the man to health again. His time of commitment should depend on his condition, and be followed by parole and test as to his final cure. Here each case can be the subject of special study, and special remedies to make recovery permanent. The incurables can be housed and made self-supporting, and the curables can be made self-supporting while undergoing treatment. A certain number of cases can pay for treatment in part or entire, but in all cases employment should be a part of the treatment. The practical character of such military training hospitals is established on the experience of every prison and asylum in the land. Such hospitals should combine the best features of the home, hospital, asylum and penitentiary, with special adaptations for this class.

The great principle is to quarantine the victim until he is cured, and prevent the spread of the disease, and to study the condition and causes, and from this be able to apply the remedies and methods of prevention. Another great principle is to recognize that inebriety is the result of physical conditions which can be seen and understood; also to recognize that the theory so widely accepted, which explains the phenomena of inebriety as a moral evil is contradicted by all the facts.

If this moral theory is true it would be the strongest evidence of the failure of civilization and Christianity.

To-day the drink problem appeals to us as a terrible fact, not as a theory, and its causes and methods of cure and prevention are the most important questions of the hour.

Some of the outline facts which scientific study is

rapidly building up, and supporting by constantly increasing evidence, may be grouped as follows:

1. Inebriety is more widely extended in this country, and of greater fatality, than all other diseases. This fact is not practically recognized because the theories of its origin are still involved in superstition.

2. No one cause or disease so greatly perils the social sanitary and physical conditions of life and living, as inebriety. No one cause has greater influence in its production, than heredity.

3. The degeneration of brain and nerves, that always follows the excess of the use of alcohol, goes down to the next generation with absolute certainty, appearing in some form or other.

4. The remedy is to stop this polluted stream at the fountain; to prevent the marriage of inebriates; to make marriage a public act, in which the welfare of society and civilization are concerned; to prevent the transmission of disease of any kind from heredity; to make it a criminal act to marry where both parties are defective.

5. To study the unsanitary conditions of life and living which predispose to inebriety; to realize that certain lines of conduct and failure to live properly are dangerous and fatal; that education may be more dangerous than ignorance if applied wrongly; to realize that inebriety is always evidence of brain failure and defect with exhaustion, which can be seen, and prevented by physical means and appliances.

6. The question of remedies begins first from actual physical means and conditions which control and influence other physical states: such as the removal of causes, and placing the man in the best possible state to recovery.

7. The present legal treatment of inebriety by fines and imprisonments fails most disastrously. The degeneration from which inebriates suffer are increased, and the victim is both literally and theoretically trained to worse and more incurable conditions. The lower courts, by indiscriminate fines and imprisonment, are doing irreparable injury under the guise of curing and preventing this disorder.

8. All scientific study points to the only rational remedy, which comes from recognition of the disease of the inebriate, and the need of physical restraint and treatment in work house hospitals. It recognizes that special quarantines and special treatment are essential for restoration and cure.

These hospitals should be self-supporting from the work of the inmates, and the money they are able to pay for their care and treatment.

Finally, the social science problem of this great drink evil for 1892, is not touched by prohibition, moral suasion, the pledge or the prayer. These are merely agitations, long roll beats, rousing public interest. The real evil is farther back, and yet nearer to all our relations of life. In closer contact with our homes, and the almost infinite range of causes, that enter into the success or failure of life.

To-day, over half a million inebriates are suffering and dying in this country, unknown and unrecognized practically. The number is increasing, and the losses from them are increasing. This army of inebriates are whirled along on their last march to the valley of death, and the mouth of a hell that stretches on into the future, crippling the generation to come. They may have a flashing instinct that some one has blundered, but there is no time for question or reply. On, on, obeying orders not heard by the coarser senses, and following lines of march that lead to extinction.

The scientists looking beyond the mass of clouds and darkness which surround this subject, find that the inebriate is no exception to the vast armies of diseased, and his restoration and cure are along the same physical lines of cause and effect.

Insanity has been studied over a century as a disease and yet only a few facts have been established, and preparation made for more exact study. Inebriety, an infinitely more complex disease, is unknown, practically. Only a few pioneers are approaching it from the physical side, and yet the facts are so numerous and startling, and the possibility of prevention and cure so positive, that the enthusiasm of the student increases at each step. An enthusiasm and confidence that behind all this mystery of inebriety will be found a majestic order of forces, springing from unknown causes, moving in unknown orbits, and about unknown centers; also, not far away, all this confusion of theory and practice will disappear, and inebriety will be treated and cured as other diseases are.

REPORT OF THE SURGICAL CLINICS,

Held at the Western Pennsylvania Hospital, before the Students of the Western Pennsylvania Medical College,

BY PROF. J. B. MURDOCH.

[Reported by E. E. Wible, M.D., a member of the Graduating Class.]

(*Continued from page 319.*)

November 8, 1890.

FRACTURE OF THE BASE OF THE SKULL.

This man, æt. 27, was hurt and admitted to the hospital on October 16, 1890. He is a brakeman on the Pan-Handle Railroad. While riding on top a box car a stone came rolling down the side of the hill near the Point Bridge and struck him on the forehead above the left eye, causing insensibility of the patient to some extent, bleeding at the nose and at the left ear and ecchymosis under the sclerotic coat of the left eye. When you have a patient that has received a blow on the vault of the cranium sufficient to cause a fracture, although you may not be able to find one, and there is a bloody watery discharge from the ear, ecchymosis of the eye, you have a right to suspect a fracture at the base of the skull.

Fractures of the *base* of the skull may be caused in three different ways, viz.: 1. By the extension of the fracture from the vault to the base of the skull. 2. By "contre-coup" where from a fall or blow on the vertex the fracture is produced in a place diametrically opposite to that struck. This sort of fracture is sometimes disputed, but post-mortems show that it does occur. 3. By a shock being received through the spinal column against the condyles of the base of the skull by a fall from a height on the feet or hips.

Fractures involving the anterior fossæ of the base of the skull will cause the orbital plates to be broken or fissured. Hæmorrhage into the orbit and areolar tissue about the eye, known as ecchymosis, is commonly considered as evidence of a fracture of the anterior fossa. This form of ecchymosis must, however, be distinguished from the subconjunctival and subcutaneous ecchymosis, which constitutes the ordinary "black eye," by the fact that it is unaccompa-

nied by contusion of the superficial structures. Fracture in the middle fossa involves the petrous portion of the temporal bone.

Hæmorrhage from the ears and a discharge of thin watery fluid from the ear or nose are considered important signs in this form of fracture. Fracture in the posterior fossa usually involves the petrous portion of the temporal bone, and the important signs are the same as in fracture of the middle fossa. Fractures of the base of the skull are not necessarily fatal, which is proven by examples we see in museums. The danger as to recovery depends not so much on the fracture as on the amount of injury done to the cranial contents and the subsequent inflammation resulting therefrom. Patients may have bleeding from the ear and not have any fracture, the bleeding being caused by rupture of the membrani tympani. This may be differentiated from fracture by the reason that in the latter the hæmorrhage is profuse and long-continued. The other symptom, which is the more pathognomonic, is the discharge of the watery fluid from the ear. It sometimes continues to flow for several days, and as much as a quart has been known to escape. This discharge is, in most cases, due to the escape of the cerebro-spinal fluid; it is rapidly renewed after its escape. This man had a narrow escape, as such injuries are very liable to result in inflammation of the brain. The treatment in olden times in these cases consisted in the abstraction of blood, which procedure is, no doubt, valuable; but by free purgation we derive just as much good. In this case, we administered the pulvus jalapæ compositus to produce purgation, which was followed by small doses of calomel, and repeated until it produced a slight touching of the gums. We applied an ice cap to his head for its local antiphlogistic effects. And in addition to the medicinal treatment we enjoined rest and quiet in a darkened room, and the patient not to be talked to; this being as important as the medicines. He also had some bromide of potassium to produce sleep. He is feeling well now, has some appetite, and all he needs now is some tonic treatment. The following will be given him, viz.:

R—Potass iodide, 3 drachms.
Ext. Ergotæ fl., 4 drachms.
Tr. cinchonæ co. ad., q.s., 3 ounces.
Dose—A teaspoonful.

SUPPOSED FRACTURE OF THE NECK OF THE FEMUR.

I next show you this colored man, aged 17, who last December, while working about a building, fell sixty feet, striking on his right side and buttock. He was not able to walk for three months thereafter; what his treatment was we do not know. He was sent here for treatment for disease of the hip-joint. I have not made out a positive diagnosis yet, and if any of you can help me I will be much obliged to you. When standing erect, you see, the right heel is about an inch from the floor. By measuring, we find the right leg to be 34½ inches from the anterior superior spinous process of the ilium to the inner malleolus, and the left leg 36 inches, showing a shortening of one and a half inches in the injured limb. This is one of the most difficult cases of diagnosis that I have ever encountered. If it is a dislocation at all, it is one on the dorsum ilii; there are, as you know, four dislocations of the head of the femur. It might be a fracture of the neck of the femur, because in this there is also shortening of the limb. We are deprived of crepitus on account of the long time since the injury. There is very little motion at the hip-joint, nearly complete anchylosis. Thus you see we have some symptoms that point to a fracture, and some to a dislocation. My own opinion is that it has been a fracture of the cervix femoris. The immobility being caused by the abundant callus thrown out. By applying "Nelaton's test line," which is one drawn from the anterior superior spinous process to the tuber ischii, we find that the trochanter major is one and one-half inches above this line, while in the normal limb this line crosses the tip of it. To diagnose these cases, sometimes a long needle is passed into the acetabulum to ascertain whether or not the head of the femur is there present. In diagnosing these cases hip-joint disease must be taken into consideration; but the history of this case excludes that. In making a differential diagnosis between fracture of the neck of the femur, and dislocation on the dorsum of the ilium, the following will be found to be valuable:

FRACTURE.

1. Frequent in advanced life.
2. Often caused by fall on trochanter major.
3. May have crepitus.
4. Preternatural mobility.
5. Limb rotated outward.

DISLOCATION.

1. Rare in advanced life.
2. Never caused by fall on trochanter major.
3. No crepitus.
4. Preternatural immobility.
5. Limb rotated inward.

November 15, 1890.

ACUTE SYNOVITIS.

Gentlemen: Here is a man, who, last Thursday, in trying to jump from a moving train, fell, causing several slight scalp wounds and an injury to his right knee. It was thought at the time that it was a fracture of the patella. But we find such is not the case. We now find the joint full of a serous fluid, the result of an acute synovitis, which is a serious affection. You will notice on the dissection of the cadaver, how extensive the synovial sac of the knee is. It is said by some one to be as large as the pleura. Here we have severe aching pain in the joint, increased by motion, great swelling, accelerated pulse and all the symptoms of acute inflammation. If this inflammation is arrested at once, it is a matter of not much moment, but if allowed to go on to suppuration, it may endanger the life of the patient as well as the usefulness of the limb. Rest and the application of an ice bag will often arrest the inflammation in its early stages. This limb will be put upon a double inclined plane, and a bag of pounded ice applied. Perfect rest of the joint is the first thing to be enforced; this will be attained by putting the limb in a splint. The application of fifteen or twenty leeches around the joint, would be a very proper course of treatment, followed by the application of an ice-bag, but as we do not have the leeches we cannot do that. I suppose to do something better than the application of leeches, an operation that has done more benefit and to more people than any other operation, that is plebotomy, venesection or bleeding. Fifty years ago it was a custom for healthy people to be bled in the spring of the year, and it was thought to be necessary for the maintenance of their health

so to do. In acute inflammation of serous membranes, I still regard it a very useful remedy. The elder Prof. Gross, of Philadelphia, said at a meeting of the American Medical Association once, that it was a lost art, and he inquired of the physicians present, about five hundred in number, if any one of them had a thumb lancet in his possession, and not one of them answered that he had. I have no doubt that before you are as old as I am this method will be revived again. The operation consists in tying a handkerchief around the arm above the elbow, so as to arrest the venous but not the arterial circulation, having the patient in a sitting posture, and grasping a stick or broom handle to steady the limb, which is held out in a semi-supine position. I will not cut the vein entirely off. I will make the incision, obliquely, into the median cephalic vein, being careful not to cut too deep, because in so doing I might cause a varicose aneurism. Bleeding to the point of syncope is thought proper when an inflammation is serious, but as it is not necessary so to do in this case and the patient objects to it, a smaller quantity will suffice. I believe within the next ten years every intelligent physician will have a thumb lancet in easy access.

Inflammation of the synovial membrane bears about the same liability to the loss of a limb as inflammation of the pleura does to the liability of loss of life. Now as we have bled him sufficiently I take off the handkerchief and the bleeding stops. We will dress the wound with bichloride gauze and a roller bandage. The ancients believed that when the blood would assume a buffy coat on its surface, when left standing for some time, it was proof that it had answered a good purpose on account of having too much fibrin in the blood. In addition to the bleeding we will give him a cathartic of an ounce of sulphate of magnesia daily, and if he has pain, morphia a quarter of a grain. All the treatment that the scalp wounds need is the cleansing with soap and water, and anointed with sweet oil or vaseline.

AMPUTATION OF A FINGER.

This man, two weeks ago while chopping wood, was driving a wedge with an ax, when the ax slipped off the wedge, inflicting a compound dislocation and injury extending into the metacarpo-phalangeal joint of the index finger of left hand. The head of the metacarpal bone was cut off. I propose to amputate the finger. Sometimes in amputation you will be at a loss where to get sound tissue enough for the flap, so it is somewhat in this instance. I will make the flap from the inside of the forefinger.

Having now severed the finger, I remove all the unhealthy tissue with a Volkmann's spoon. I do not hope to get union by first intention on account of the condition of the tissues in the wound, but it will heal by granulation.

INJURY TO THE ELBOW JOINT.

This man received an injury to his elbow joint, November 6, while in a railroad wreck at the West Newton, Pa. Fractures of the elbow are the most annoying that a surgeon is called to. In examining an elbow, place a finger on each condyle of the humerus, then find the point of the olecranon process, which in the normal position will be midway between the condyles. Then by flexion, extension and rotation the nature of the injury can be made out.

By flexion and extension you can determine a fracture of the internal condyle; and by pronation and supination a fracture of the external condyle. By remembering this you will be able to differentiate between these two forms of fracture. There is no crepitus here now on account of the time that has elapsed since the injury. An important point is never to forget passive motion. Hamilton recommended that passive motion should be employed from the seventh to the tenth day after the fracture in children.

I believe that no passive motion should be employed until some union of the fracture has taken place, and until it does not produce pain to the patient, which is usually three or four weeks after the injury.

DISLOCATION OF THE HIP.

This man, an Italian, is the person for whom I reduced a dislocation of the head of the femur on the the dorsum ilii, yesterday, in the presence of a number of you. While pushing a truck and in a stooping posture, another truck came up behind and struck him on the buttocks, dislocating the right hip joint. You remember the patient was anæsthetized, and after several fruitless attempts to reduce it by flexion, abduction and rotation of the thigh, it was afterwards reduced by extension and counter-extension. The extension must not be made in the line of the axis of the body, for in so doing you will only pull on the ilio-femoral or "Y" ligament; but make the extension in a direction across the thigh of the other leg. You see the legs are parallel now and both everted, while before the reduction yesterday, there was shortening of the affected limb, inversion, alteration in the shape of the hip and the axis of the thigh crossing the other at its lower third.

November 22, 1890.

Gentlemen: I want to show you, this morning, the patient for whom I reduced a dislocation of the hip a week ago. You notice he walks a little lame. You remember we reduced it by extension and counter-extension after several futile attempts to reduce it by manipulation. Since the days of Hippocrates, a controversy has been going on among surgeons as to the best method of reducing a dislocation of the hip. The methods, by manipulation and extension and counter-extension, are the principal ones employed.

Within the last fifty years the process by manipulation has about superceded the process by extension and counter-extension. This was the seventh case that I have had where manipulation has failed and extension and counter-extension succeeded readily. I have resolved hereafter always to try extension and counter-extension first, because if I do fail by it, it will do no harm to the joint, while the method by manipulation does injure the capsule to some extent and may even produce a fracture of the neck of the femur. So I would advise you to employ extension and counter-extension, with your foot in the perineum and making traction with your hands, having the patient profoundly anæsthetized. The rent in the capsule is usually at the lower part, and hence by extension and counter-extension you reduce the dislocation by way of the rent in the capsule. The lameness is due to a slight inflammation of the capsule and ligaments surrounding the joint; but this will soon subside, and he will be discharged

from the hospital in a very few days. I only show him to-day that you may see his condition and follow up the case.

FRACTURE OF THE CLAVICLE.

I am very glad to show you this case, because it relates to what I am lecturing on now, didactically, the subject of fractures.

This man while chopping down trees, day before yesterday, was struck by a limb of the tree, sustaining a scalp wound and a lacerated wound of the skin of the cheek. He was thrown to the ground, sustaining an injury to his left shoulder. He complains of pain when the left shoulder is moved; he can, however, place the hand and arm of the injured shoulder in the position employed in the Dugas' test, showing that no dislocation of the shoulder can be present

Passing my hand along the clavicle, I find a false point of motion and the usual signs of a fracture of the clavicle, which I want to speak to you about to-day. You will please notice the position of the shoulder, the left or injured one is lower than the right. Let us now follow the course of fractures from their causes; the exciting causes are external violence and muscular action. External violence may act directly or indirectly. This is an example of indirect violence, which we learn from the history of the accident. The symptoms of fractures are divided into subjective and objective. The subjective are, as we find them in this case: pain and history of the accident. The objective signs are deformity, the left shoulder droops and hangs lower than the right, and in measuring from the sternal notch to the acromion process, on the injured side, I find that it measures $6\frac{1}{2}$ inches and on the uninjured side, $7\frac{1}{2}$ inches. Beside these signs, we have pain, loss of function, false point of motion and crepitus.

The clavicle is usually broken near the outer end of the middle third, the displacement consisting mainly of the outer fragment, which is drawn downwards by the weight of the arm, and inwards by the action of the muscles attached to the humerus and scapula, viz.: the pectoralis major, the latissimus dorsi, the rhomboidei, trapezius, levator anguli scapulæ, and pectoralis minor.

Next to the radius, the clavicle is more frequently fractured than any other bone of the body. Fracture of this bone occurs very frequently in children, from falling from their carriages or high chairs. In adults the displacement of the outer fragment of the bones is downwards, backward and inwards. The downward displacement is caused by the weight of the arm, the backward and inward by the action of the muscles attached to the scapula. The tilting up of the inner fragment is caused of the action of the sterno-cleido-mastoid muscle. The line of treatment, is to restore the deformity, which is done by relaxing the sterno-cleido-mastoid muscle, by preventing the weight of the arm from dragging down the outer fragment and by fixing the scapula. All this can be accomplished by position alone, carrying the shoulder upwards, outwards and backwards.

Probably the best treatment is to put the patient on his back, on a hard mattress, and the arm flexed and carried across the chest so that the hand rests on the sound shoulder.

By this simple method, the deformity in most cases can be completely reduced, but it is seldom that persons will submit to this plan of treatment. Society ladies, however, will usually submit to any kind of treatment that will restore their good forms; because the deformity resulting from a badly united clavicle would sadly impair their forms for low cut dresses. Patients are very liable to get well with some deformity even when the best of treatment is employed, but happily it does not interfere with the use of the arm. Dr. Moore, of Rochester, suggests a dressing which is a very good one; it consists of a piece of muslin or canton-flannel about three yards long and ten inches wide, applying the middle of the bandage to the point of the elbow, then bringing the inner extremity up over the fractured clavicle, across the back, through the opposite axilla and up over the sound shoulder; the other extremity through the injured axilla, across the back, over the opposite shoulder, through the axilla and fastened to the other extremity.

I think this a very excellent bandage and it can be made of a scarf or shawl. In addition to the bandage the hand is carried in a sling. Moyer's method consists in taking a square piece of muslin, fold it diagonally, passing it around the body so as to catch the elbow, the arm being in the "Velpeau position," and tying on the back, the two hanging corners of the muslin are carried up inside the arm and tied around the neck. This method is convenient for children. Mr. Goslin has adopted a different method of the last named bandage; he puts the arm right in the fold; tying it as in the former, behind, and the other two ends tied around the neck; the bandage applied in this manner is not easily displaced.

Velpeau's bandage is a common one. The fracture is first reduced, the hand placed on the sound shoulder, and a compress placed between the side of the chest and injured arm. The manner of application is as follows: the initial extremity is placed in the axilla of the sound side, carried over the back, over the injured clavicle down on the front and outside of the arm, under the point of the elbow and over the chest to the sound axilla. Make two similar turns to fix it; then pass circular around the chest advancing up the arm towards the clavicle; then make a turn around the body. This bandage will not be retained very long unless it is pinned, or starch or silica is rubbed into it. Formerly it was the practice to put on a posterior figure of eight bandage, but it is very uncomfortable to the patient and they rarely submit to it. Experience has proved that it is not a good bandage. Another plan is to put a board or yoke on the back and draw the shoulder back to it; this would do very well if it could be borne by the patient

Another method is the three bandages of Desault. The first bandage is to hold a pad in the axilla, which should be about 2 inches thick, and reaching from the axilla to the elbow, which acts as a fulcrum, and using the humerus as a lever, the fragment is drawn outwards. The second bandage acts as the force to the humerus over its fulcrum, the pad, and reduces the inward displacement and brings the fragment outwards. The third bandage is to lift the shoulder upwards. The initial end of the roller is placed in the sound axilla, as in the Velpeau bandage, passed across the breast to the seat of fracture, where there must be placed a compress, over this and down the back of the arm to the elbow; thence upward to the sound axilla, through it, over the back, over the fracture, down the front of the arm to the elbow, and then to the back; then to the sound axilla; through

this and over the chest to the fractured clavicle. The third bandage of Desault forms two triangles; one is in front and the other is behind the chest. It is quite complicated, and liable to become disarranged unless pinned at every crossing. Another favorite dressing, and one that is very effective, is that of Dr. A. Sayres, of New York. It consists of adhesive plaster 3 inches wide. One strip is applied by forming a loop around the arm of the affected side, well up the axilla; then, having the arm in position, draw the strip around the body over the back, draw it tightly and secure it to the chest, thus drawing the outer fragment outwards. A second strip is placed under the elbow and both ends fastened over the opposite shoulder drawing it backwards, at the same time supporting the forearm. When there is difficulty in holding the fragments in apposition there is no method so effective as this, except the position on the back.

ABSCESS OF THE THIGH.

This man sustained a fracture of the femur two years ago. Some time after its union, an abscess occurred at the place of fracture, and some pieces of bone came out, going to show that there was some disease of the bone. By measuring, I find the injured limb 1¾ inch shorter than the other. I see scars where abscesses have been. At present the outer and posterior surface has the appearance of an abscess. I propose to open this and examine the bone with a probe, and if any diseased bone or loose pieces of bone are present, I will remove them. I will open the abscess first, making a free incision. I suppose there is tubercular matter in this, and upon a microscopical examination we might find the bacilli of tuberculosis. There is a cloaca here, and when they are present, they generally lead down to diseased bone. I pass a probe and find a roughened condition of the bone, but not diseased portions. I will put in a drainage tube through the limb, and thus hope to cure the sinuses.

This is what is called through drainage, and it is employed in compound fractures. It will be thoroughly washed out with antiseptic fluid, also scraped out with a Volkmann's spoon. The large incision on the outer side of the leg will be partly sewed up with catgut sutures. It will be put up in the usual antiseptic dressings, and I will direct that it be washed out every day, and we thus hope to effect a cure.

November 29, 1890.

Gentlemen: I propose to make some remarks about fractures, as that is the subject I am lecturing on now. Fractures of the femur may be divided into three classes, viz.: 1, those of the upper extremity may be subdivided into intra-capsular and extra-capsular. This was the classification of Sir Astley Cooper, and it is a very good one. A fracture within the capsular ligament is usually considered by surgeons as one that does not unite. There may be some rare exceptions. The causes of non-union of intra-capsular fractures are on account of the deficient vascular supply to the fragment, the difficulty in keeping the fragments in apposition, and the presence of the synovial fluid at seat of fracture.

Fracture of the neck of the femur occurs usually in old people, 60 years or more of age, and most frequently in women. The cause of fractures being more frequent in old persons is usually said to be an excess of earthy matter in the bones. This theory is now about abandoned, because on examination of the bones of old persons it is found that the compact substance has become thinner than normal, and the cells in the spongy substance larger, hence there is really less bone, and consequently more fragile. In old people a very trivial cause may produce a fracture, such as slipping from a curbstone, tripping over a loose piece of carpet, an unexpected step, or even turning in bed. We are never able to tell exactly whether a fracture is intra-capsular or not. Extra-capsular fracture of the neck of the femur occurs more frequently in younger persons, caused by falls on the trochanter or other direct violence. This form of fracture unites well, the amount of callus being very large. The shortening in these cases of intra-capsular fracture, determined by measurement from the anterior superior spinous processes to the inner malleoli, is usually small at first (about ½ inch), and subsequently increased to 1½ or 2 inches, by the giving way of the ligaments and the capsule. When this gradual shortening takes place, you may be certain that it is intra-capsular. In extra-capsular fracture, the shortening is as much at first as afterwards. Both these varieties may be impacted fractures, the neck being driven into the head or into the spongy portion of the trochanter major.

It is very important that you do not break up the impaction by your manipulation, because the union would not take place near so readily, or probably never.

(To be Continued.)

CASES TREATED BY METHYL-VIOLET.

Reported to the Kansas City Academy of Medicine, January 2, 1892.

BY FLAVEL B. TIFFANY, M.D.,
PROFESSOR OF OPHTHALMOLOGY, UNIVERSITY MEDICAL COLLEGE, KANSAS CITY, MO.

Case 1.—Phlyctenular keratitis or papillary cornetis as treated by methyl-violet. Dosia Huston, age 5 years, was brought for treatment December 11, 1891. History as obtained from the father: "Child has had very sore eyes for over a year; has not been able to open her eyes nor bear any light for several months. Her face has been sore and covered with scabs for a long time. The eyes constantly water, and tears seem to scald the face. She never wants to go in the light, but begs always to stay in the house where it is dark; she lies much of the time with her face on the floor with her sunbonnet on, or face buried in a pillow or on her mother's lap. If up, she goes with hands over the eyes."

The face of the child when brought was covered with a purulent mass of scabs, and the child would scream with pain when any light was allowed to come to her eyes. She insisted on having a sunbonnet drawn closely over the face, shading the eyes. The eyes were firmly closed, and upon opening the lids I found the eyeballs turned up under the lids away from the light, and I was obliged to use lid retractors in order to get a view of the corneæ. When I was able to see them, I found numerous papules upon the cornea. There was also pemphigus or watery blisters of the face, scalp and feet, as well as other parts of the body. I had a photograph taken of the child under chloroform, which shows a mass of scabs over the face. (The etching does not show as well as the photograph.) I commenced the use of methyl-violet in fluid form, 1 to 1,000, dropped into

the eyes, and on gauze as a mask over the face. The mask was left on until the following day, when the condition of the face was already improved, and the child was able to open the left eye. On account of the cloth adhering to the sore surface, pomade of the same strength of methyl-violet was substituted, and

FIGURE 1.

also put into the eyes. On the third or fourth day the child began to pull the bandage off the eyes, and look about with both eyes open, a thing she had not been able to do for several months. In less than a week from the time the methyl-violet was first used, both eyes would tolerate light, and we had little trouble in getting a good view of the corneæ, which were rapidly clearing. On the ninth day a second photograph was taken, which shows the face clear from

FIGURE 2.

sores and both eyes open, although, as the photograph indicates, when in bright light, as was necessary to get a good impression, there was some photophobia. In a shaded room she was able to hold the eyes wide open. In less than two weeks the patient was discharged cured. In this case I purposely avoided using any other medicaments, thus relying wholly upon the methyl-violet, wishing to give it a fair test. Now I do not claim that a cure in this case might not have been brought about by other remedies; but I do not believe it could have been accomplished in as short a time and with the apparent permanency, as up to the present writing there has been no recurrence of the disease (March 5, 1892). The eruption of the skin on other parts of the body was also treated by the same pomade of methyl-violet, and disappeared at about the same time as the corneal trouble. The child being evidently of a strumous cachexia, I gave her syrup of the iodide of iron, which I have no doubt assisted in the speedy cure.

Case 2.—Gust Nordland, age 24 years, farmer, Swede, came December 16, 1891, with the following

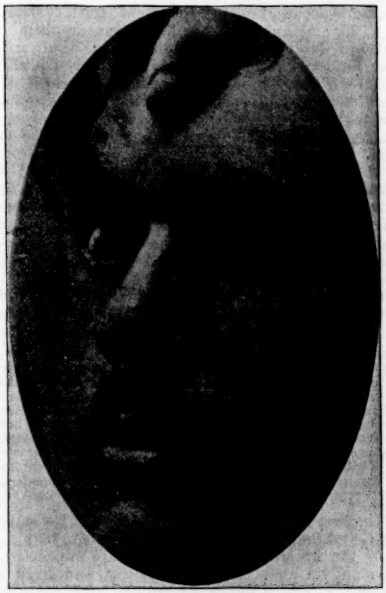

FIGURE 3.

history: "Eight years ago I was struck over the right eye by a brush flying back from a man in front of me. We were in a boat and in the act of landing. I was holding the oars and could not protect myself. The old man in front caught the brush on his arm, and as he pulled away the brush flew back and struck my right eye. This immediately produced partial blindness, so I could not read with the eye, and the sight grew more dim each year. There was pain in the eye at the time, but it did not last long. No pain was felt afterwards until recently; now the eye aches all the time; last Sunday the pain was very severe." Sight has been gone for four years. Vision of right eye 0; vision of left eye $\frac{20}{20}$. I find a tumor of the ball just back of the cornea at the superior and outer part, near the insertion of the oblique muscles, as

large as a Lima bean. (Fig. 3.) The sclera over this region is thin, showing the choroid through. The growth or tumor, he says, has only been coming two months, and is now growing fast, increasing every day—probably sarcoma. December 17, with hypodermic syringe I injected the tumor with methyl-violet solution, 1 to 1,000, gtts. v. There was a watery fluid escaped under the conjunctiva, producing some chemosis. December 18, tumor reduced and pain gone. December 19, no pain and less tension. December 20, no pain, methyl-violet 1 to 1,000 dropped in the eye once a day; this treatment was continued for one week from the time of first injection. Then a fresh solution of 1 to 1,000, gtts. v, was injected into the vitreous chamber. The injection created some soreness of the ball, but no pain followed either injection. Care was taken that the needle used for the injection was sharp, the instrument aseptic and the fluid fresh. December 26, methyl-violet pomade was applied instead of fluid. Some pain followed this application. The fluid was resumed, 1 to 3 gtts. dropped into the eye each day. Since then up to the present date there has been no pain or soreness; the eye feels comfortable, and the patient says it does not seem so large under the lid; tension is reduced to the normal. The ciliary injection, which was quite prominent when first examined, is nearly gone, and the tumor is certainly one-third smaller than at the first examination. At the last examination I noticed a slight retinal reflex of this eye, showing that the turbid vitreous was clearing; and the patient mentioned that he was now able to discern objects passed before the eye, something he had not been able to do before for several years. The appended letter shows the permanency of the good effect of the treatment:

LINDSBURY, KAN., January 27, 1892.

DR. F. B. TIFFANY, KANSAS CITY, MO.

Dear Sir:—As the tumor of my eye is about the same as it was when I left Kansas City, I thought about writing to you for advice. Do you think it would be advisable to inject any more medicine? Do you think it would reduce the tumor by injecting any more? If so, please let me know by return mail, because I can go down with a carload of cattle that is going to be shipped from this place next week, so it will cost me nothing to go down if I know it in time. I have had no pain whatever in the eye since I came home.

Respectfully yours, GUST NORDLAND.

The first injection was made the 17th of December, 1891, and the second the 23d of December, 1891.

As the eye was quiet and evidently improving, I have not yet made the third injection, and up to the present writing (March 5) the eye still continues to improve.

Case 3.—M. Q., age 6 years, Quick City, Mo., came August 6, 1891. History as obtained from the father: About four weeks ago, the child stuck a table fork in his left eye, at the lower and inner third of the eye (ciliary margin of the iris).

Diagnosis.—Luxation and traumatic cataract of the lens. Vision, count fingers. This patient was brought during my absence from the city. My assistant, Dr. Merriman, made the above diagnosis. The parents then took the child to another oculist, who diagnosed suppuration of globe, and advised immediate removal of the eyeball. Some days later the child was brought back to my office, when an examination revealed a bright fleshy-looking body rising from the inferior ciliary region, with blood-vessels unting over it. The body was as large as a Lima bean. I diagnosed glioma, and advised enucleation. But the parents wished me to save the ball, if possible without damage to the other eye. I insisted that there was danger of sympathetic ophthalmia of the fellow-eye, but no immediate danger. Not getting their consent to operate, I commenced the use of methyl-violet, 1 to 1,000, dropped into the eye; this relieved pain and soreness of the eye. I prescribed a bottle of methyl-violet, to be taken home with them (in the country) and its use continued. The child has been back to me several times since, and there has been no pain or soreness since the use of methyl-violet, and at the last visit the tumor seemed to be smaller.

Since methyl-violet has such an extraordinary penetrability, and causes little or no irritability if used in the strength of 1 to 1,000, and has for its predilection the nuclei of cells and bacilli, it seems especially indicated in deep-seated affections of the eye, especially those of the uveal tract.

A PROPER SUBJECT FOR PUBLIC HEALTH.

BY E. CHENERY, M.D.

As I have been in dispensary work, I have been surprised at the prevalence of the itch, particularly among the Italians, and others of the lower foreign people who crowd together in uncleanliness, and then go through the community hawking their trinkets. Repeatedly I have seen persons covered from head to foot with this infectious disease, and on inquiry found that they were peddlars, going from house to house with cloth and other articles, which the people handle. Further inquiries have elicited the fact that they have had the eruption several years, and that others of the same dens are in a like condition. Now it is almost useless for a private or dispensary physician to attempt to eradicate the disease, even from one of them, to say nothing of exterminating the pest from the mass of filthy rags which they wear or amid which they sleep. Such dens of infection are far more worthy of public attention than many subjects of less practical importance. I have wished I could send word to the Board of Health, and have such people and such quarters taken into vigorous hands. As it is, I am afraid that our city board has reversed the old adage—attending to the dollars and leaving the cents to take care of themselves. Forty years ago a teacher of skin diseases came to the office of my preceptor, who had the oversight of large dispensary work at the north end, desiring that we would let him know of any case of scabies, for he said it was one of the rarest diseases in the city. According to my experience in that part of the city, he could not say that to-day. Boston may be an exception to other cities.

ELECTRIC BATHS FOR THE TREATMENT OF SYPHILIS.—At the General Hospital of Vienna M. Kronfeld has found that the employment of electric baths causes a more complete and efficacious absorption of mercury than other methods of administering the drug. More mercury is eliminated in the urine; no albuminuria is caused; polyuria is rare. The patients are stated to be cured in from two to four weeks after having taken from ten to twenty-five baths. Symptoms of mercurial poisoning must be looked out for in this as in other modes of using the drug.

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This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership. On receipt of the above amount the weekly JOURNAL of the Association will be forwarded regularly.

SATURDAY, MARCH 19, 1892.

IDIOSYNCRASY.

In the last number of his *Archives of Surgery*, MR. JONATHAN HUTCHINSON has a brief note respecting this subject. There is a want of agreement, he holds, in the minds and in the expressions of different writers as to the importance, medically speaking, of idiosyncrasy. In no other way could he understand some of the literary allusions that have lately come under his notice. For example, he has seen in a recent review of the literature of anæsthetics a statement, made with great emphasis, to the effect that no one now thinks of adducing as a means of explaining the fatal cases. "I may confess," he says, "that to my own mind it still looms out as by far the foremost of the agencies at work." Without doubt, there are other very important factors; no doubt there are different degrees of risk attaching to the different drugs used; no doubt there are some methods of application that are more perilous than others, and no doubt there are instances where a temporary lack of attention on the part of the anæsthetist is chargeable with the bad results. When, however, all due allowance has been made for these factors, it still remains an uncontroverted experience that no two persons are alike in their susceptibility, and that there are those who, without known derangement of health, are susceptible in a most peculiar degree. This peculiar personal attitude and aptitude is true of other drugs besides those that are used as anæsthetics; it may be said to run through the whole pharmacopœia. Not the least among these may be named potassium iodide, arsenic, mercury and belladonna. Every now and then there are unexpected cases of untoward results, and no skill has yet been able to recognize in advance where those results are liable to befall. To this liability the word idiosyncrasy may be properly applied, and it seems like a flat contradiction of an every-day experience to assert that it does not exist in reference to anæsthetics. During the period of MR. HUTCHINSON'S service as surgeon to the Moorfields Ophthalmic Hospital, he never lost a patient from the anæsthetic, and had very few cases of alarm. In one of these cases, however, he was not far from an accident, when engaged in extracting cataract for a man between fifty and sixty years old. Artificial respiration was needed, and with that and the nitrite of amyl, the life of the man was saved. Years passed by, smoothly enough, too, so far as anæsthetics were concerned, when again, in another cataract operation, exactly the same alarm occurred, and the same measures were put into operation. The house surgeon told the surgeon afterwards that the patient was *the same man* who years before had given them the trouble and alarm. The man had not been recognized as the same by the surgeon, but on examining and comparing notes, it was found that the patients were one and the same.

The use of the term is in some sense a confession of ignorance, and as time progresses, the clearing up of more and more of uncertain diagnoses must restrict the currency of the word. In regard to the striking experience of MR. HUTCHINSON, a lesson or two can be drawn by those who are engaged in therapeutical instruction. In the first place, it is important that the individual—like the one who illustrates MR. HUTCHINSON'S argument that undoubtedly there is such a condition as idiosyncrasy—should be plainly told that he has his personal peculiarity in the presence of chloroform, or other drug, and that he should put his surgeon on guard in the event of future operations. Many persons are so taught, but it is evident that in MR. HUTCHINSON'S case the second experience was encountered just as unexpectedly as if the first peril had never occurred. Furthermore, we hold that instances like that of MR. HUTCHINSON may wisely be used as a text to show that the personality of the patient under treatment must enter into the attack upon disease, as well as the diseases themselves, and that the personal equation will often disturb the most carefully laid plans of procedure. And so, too, on the same line of deduction, the practitioner may acquit himself of apparent blame, on account of misadventures of treatment, in the knowledge, when it comes to him, that his patients have manifested idiosyncracies in the same or in similar directions. It is, therefore, important for the sake of the physician, as well as the patient, that these personal peculiarities shall be duly noted and commented upon in the presence of those who are most intimately concerned.

SURGICAL TREATMENT OF PYLORIC STENOSIS.

The address of DR. NICHOLAS SENN, before the New York Medical Association, on the above subject, has been published quite fully in three successive issues of the *Press and Circular*. The paper is based on the

history of fifteen cases wherein DR. SENN operated. Two of his operations were done for the relief of cicatricial stenosis of pylorus, by pyloroplasty. One operation was done without anæsthesia. Recovery followed in both cases. Thirteen operations were for malignant obstruction, and were gastro-enterostomies. Of these, eight are tabulated as recoveries—they survived the immediate effects of the operation—and five died. The recovered cases died in from five days to twenty months after the operation. The patient who survived the longest was aged 71 years; the oldest of the patients on the list. This man was enabled to resume business for eight months. BILLROTH has stated that in none of his cases of gastro-enterostomy for malignant trouble was life continued beyond a year after operation. Three of DR. SENN's patients, two of them surviving three months and one of them four months, had no signs of pyloric constriction after the operation. The author of the address concludes with the following propositions: 1. For cicatricial stenosis of the pylorus, pyloroplasty as devised by HEINEKE-MIKULICZ is the safest and most efficient operation. 2. Pylorectomy in the treatment of cancer of pylorus is justifiable when the disease is limited to the organ primarily involved, and the patient's general condition offers no contraindication. 3. Gastro-enterostomy, by the aid of large, moist, perforated plates of decalcified bone, should be done as early as positive diagnosis is made and when a pylorectomy is not warranted by the local or general conditions of the patient.

An important lesson, drawn from the study of these cases of malignant pyloric disease, especially, is the desirability of not delaying the proffer of surgical treatment until the strength of the patient has ebbed to so low a point that death is liable to ensue from the immediate effects of the operation. DR. SENN predicts that better results will be obtained by surgeons when the profession sanctions an earlier intervention with the knife.

COLUMBUS MEDICAL COLLEGE.

This institution seems to be conducted in a very queer fashion. At the recent commencement, a majority of the faculty decided that two of the candidates for the degree of doctor of medicine were unqualified.

Their action was sustained by the board of censors of the college. In the face of this, the board of trustees of the college proceeded to and did grant diplomas to the two unqualified candidates. A natural result of the trustees' act was the immediate resignation of two members of the faculty, PROFESSORS N. R. COLEMAN and M. EIS. Others are likely to follow.

A large part of the board of trustees of the Columbus Medical College are not members of the medical profession; but this did not prevent their feeling competent to pass upon the professional attainments of students rejected by a majority of the teaching faculty and the unanimous board of censors, all of whom are physicians.

Such a condition of affairs in a reputable medical college indicates a necessity for state boards of examiners, for it is altogether possible that some other schools are conducted on the same or a similar plan to the one referred to in Columbus.

The officers of the colleges claiming to be the best should unitedly demand state legislation of this nature. Such legislation, with uniform requirements from all candidates for the doctorate degree, would be certain to send young men to schools where they would be reasonably sure of receiving proper instruction, and not to an institution where an unprofessional board of trustees assumed authority to give diplomas to any applicant, no matter how ignorant.

In fact, this action of the trustees of the Columbus Medical College removes that institution from the list of reputable medical colleges.

THE PAN-AMERICAN MEDICAL CONGRESS IN THE WEST INDIES.

DR. F. W. HUTCHINSON, of Providence, R. I., who has been appointed assistant secretary-general of the Pan-American Medical Congress for the British West Indies and Venezuela, is now visiting the islands of the Spanish Main in the interest of the Congress. He is vested with power to make appointments for those countries. The hearty coöperation which he is receiving is indicated by the report of a meeting at St. Kitts, printed in another column.

There are many reasons why the medical profession of the West Indies and of the United States should be more intimately acquainted. The exchange of American breadstuffs for West Indian products, particularly sugar, forms the basis of a commerce of more than seventy millions of dollars of annual value. A commerce of this magnitude deserves the protection of intelligent and uniform quarantine regulations. The absence of such uniform regulations is to-day the most serious impediment to the exchange of commodities between the United States and the Antilles. The fact that the colonial governments of the Spanish Main are without treaty-making power is no doubt an impediment to progress in that direction, although delegates from the colonial governments at Demarara and Barbadoes have been in Washington during the last year, with the object of readjusting trade relations between those colonies and the United States. In any adjustment of trade relations the quarantine question must play a part. This question is a moot one, involving many unsettled scientific problems, and until these problems are settled, the general question will not be ready for the plenipotentiaries. It was precisely because of this

status of the question that the recent treaty-making congress of the American republics failed to unify the quarantine regulations between South America and the United States, leaving the matter as they found it, viz., with one set of rules for the east coast and another for the west coast of South America, and still others for the United States. The Section of the Pan-American Medical Congress devoted to marine hygiene and quarantine, under the chairmanship of Surgeon-General Wyman, of the Marine-Hospital Service, offers an opportunity for the free discussion of all the scientific problems involved. The colonial governments should see that they are represented in these deliberations by the ablest talent that they can command.

There is a very important business reason why the West Indian physician should come to the United States and become personally acquainted with his confrères in this country. Dr. Hutchinson's admirable book, "Under the Southern Cross," has called the attention of the American profession, in a most discriminating way, to the value of the West Indies as health resorts; and from October to April, or even later, there is not a ship sailing from the Atlantic or Gulf ports to the Antilles but that carries a large number of invalids seeking health in the balmy breezes of occidental India. It would be highly desirable if the family physician in this country could issue to his traveling patient a letter of introduction to a reliable medical man at the other end of the voyage. It is in the course of events that large numbers of such letters will be issued, and, naturally, they will be addressed by preference, to personal acquaintances. The Section on General Medicine and that on General Hygiene and Demography, which latter will, of course, include Climatology, ought to receive many contributions from the West Indies.

Medical Promotions in the Navy.—The *Naval Register* for 1892, recently issued, indicates the following as among the changes in medical corps rank. By the retirement of Medical Directors J. Y. Taylor and T. J. Turner, two medical inspectors receive promotion, namely, Grove S. Beardsley and Henry M. Wells. The retirement of Medical Inspector T. Woolverton, and the changes just named, enable the promotion of Surgeons Edward Kershner, J. R. Tryon and W. H. Jones.

The Practitioner of the Inland Sections.—If Dr. Weir Mitchell's estimate of the place and function of the rural physician is correct, it is desirable that the latter should without delay, take one or two more medical journals. Dr. Mitchell has stated that the true measure and index of advance in the healing art are not determined by the work of single men, but by what the country doctor is.

The Albany Medical Annals.—With the January issue of this journal, the editorial charge passed into the hands of Dr. Howard T. Van Rennselaer. The *Annals* appears in a new dress, and with an increase of one-third more reading matter. Dr. S. B. Ward has a short, practical contribution on the scope of alcoholic stimulants in typhoid fever — a clear summary of our present knowledge of the subject, from physiological and clinical points of view.

ASSOCIATION NEWS.

Section on Ophthalmology.—The next annual meeting of this Section will be held in Detroit, Mich., June 7, 8, 9 and 10. The Cadilac Hotel has been selected as headquarters. For the purpose of becoming better acquainted, and cultivating a feeling of good-fellowship among the members of this Section, they will dine together Wednesday, June 8, at 6 P.M., at the Cadilac Hotel. The price of the tickets will be two dollars each, and can be obtained from any member of the Executive Committee. All those expecting to be present will kindly notify the Committee.

The Section will hold two working sessions daily. The first will open at 9 A.M. and close at 11 A.M. The second will open at 3 P.M. and close at 6 P.M.

Titles of papers for the next meeting should be sent at once to the Chairman of the Section, Dr. J. L. Thompson, of Indianapolis, Ind., or to Dr. George F. de Schweinitz, 1401 Locust street, Philadelphia, Pa.

The Committee published the transactions of the last meeting in a handsome volume, the contents of which reflected much credit on the work done at Washington, D. C. We expect the Section will considerably increase its membership this year, and that the quality of its work will be, as it should be, of the *very best*.

S. C. Ayres, Cincinnati, O.,
F. C. Hotz, Chicago, Ill.,
Edward Jackson, Philadelphia, Pa.,
Executive Committee, Section on Ophthalmology, A. M. A.

The Section on State Medicine.—It is desired to make the approaching meeting of this Section one of unusual importance and profit. Further reports are expected from the Committee on School Hygiene and its several members. The subjects to be discussed will be as follows:

First Day—The Annual Address by the Chairman. Report of the Committee on School Hygiene.

Second Day — Pollution of Rivers and Inland Streams; its Effect upon Public Health, and Measures for its Prevention.

Third Day—Needful National Legislation for the Protection of Human Life. Miscellaneous Papers.

The Development of the Section, and the Question of a Section Council of the Association.

All members of the Association, or physicians desiring to become so, who are interested in sanitary work and discussion, are requested to forward their names as promptly as possible to either of the undersigned. Any desiring to read papers will kindly send the complete title of the same, with their own names, as they desire them to appear on the programme.

BENJ. LEE, M.D., *Chairman*,
1532 Pine St., Philadelphia, Pa.
LAURENCE F. FLICK, M.D., *Secretary*,
736 Pine St., Philadelphia, Pa.

ITEMS.

WASHINGTON STATE MEDICAL SOCIETY.—The Washington State Medical Society will hold its next annual meeting at Walla Walla, May 15, 1892. The following are Chairmen of the various committees: Anatomy and Physiology, John South, Hoaquim; Chemistry and Bacteriology, H. J. Essig, Spokane; Materia Medica, J. J. Shannon, Seattle; Medicine, C. K. Merriam, Spokane; Surgery, Jas. J. McKone, Tacoma; History and Necrology, G. A. Weed, Seattle; Publication, E. E. Heg, North Yakima; Ophthalmology, F. H. Coe, Seattle; Obstetrics, T. V. Goodspeed, Seattle; Nervous System, Wilson Lockhart, Spokane; State Medicine, G. S. Armstrong, Olympia; Revision of Constitution and By-laws, H. C. Williston, Port Townsend; Arrangements, Wm. Wenslick, Port Townsend.

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.—The annual meeting of the State Society will be held in Union Hall, Post street, San Francisco, from April 19 to 23, when it is hoped that the profession will be largely represented. The committee of arrangements has obtained a reduction of 33 per cent. on round trip tickets to those attending the meeting who travel over the Southern Pacific system; and this applies not only to members, but to their families, and to any regular physician attending the meeting. These rebate certificates will be distributed to members early in March, and others may obtain them by addressing Chas. C. Wadsworth, 606 Sutter street, San Francisco. The social features, which during the last two meetings have proved so enjoyable, will again form a part of the program. Applications for membership must be sent to J. H. Wythe, Oakland, Chairman of the Board of Censors, accompanied by a fee of $7. Wm. Watt Kerr, Secretary, 600 Sutter street, San Francisco.

AN EXAMINATION for the position of resident physician in the Methodist Episcopal Hospital, of Philadelphia, will be held on Tuesday, March 29, 1892, at the hospital, Broad and Wolfe streets, Philadelphia, at 8 P.M.

The examination is open to both men and women; but applicants must, in accordance with the charter of the hospital, have the degree of Bachelor of Arts. Two residents will be elected by the trustees from the candidates who obtain the first four places in the examinations of the Medical Board.

Applications to be made to DR. JOHN B. ROBERTS, 1627 Walnut; DR. RICHARD C. NORRIS, 1028 Spruce; DR. WM. C. HOLLOPETER, 1408 North Thirteenth St.; DR. H. H. KYNETT, 1728 Spring Garden.

THE BELGIAN SOCIETY OF GYNECOLOGY AND OBSTETRICS, under the patronage of the Belgian Government, has taken the initiative in organizing "The International Periodical Congress of Gynecology and Obstetrics," the first session of which will be held in Brussels, September 14 to 19 inclusive, 1892. Three leading questions will be offered for discussion:

1. Pelvic Suppurations; Referee, Dr. Paul Segond, Paris.
2. Extra Uterine Pregnancy; Referee, Dr. A. Martin, Berlin.
3. Placenta Prævia; Referee, Dr. Berry Hart, Edinburg.

Fees: Members participating in first session, 30 francs. (This will entitle the holder to a copy of the proceedings of the Congress.)

Founders (life membership), 300 francs.

In connection with the Congress there will be an International Exposition of instruments and appliances, pertaining to Gynecology and Obstetrics.

All communications pertaining to this Congress should be mailed direct to the American Secretary, who will promptly furnish all information. All notifications to be forwarded should be received by August 1st.

Everything points to a great success in this Congress. Though notices concerning it have been rather late in this country, already men of celebrity have promised to visit and contribute papers. Among the many foreigners who have written to the Secretary General endorsing and promising support to the undertaking, may be mentioned the following eminent men:

Belgium: De Roubaix, Sacre, Mirriar, Pigeolot, Charles, Sanpart, and others.

Italy: Porro, La Torre, Mangiazalli, Bozzi, Morisain.

France: Pean, Demous, Fochier, Auvard, Doleris, Pozzi, Tarnier, Budin, Terrillon, Terrier, and others.

England: Lawson Tait, Wm. Priestly, Champneys, G. Elder, J. White, Watt Black, Thornton, Doran, Spencer Wells, Bantock, and others.

Germany: Martin, Leopold, Sanger, Gusserow, Veit, Winckel, Hegar, Kaltenbach, Freund, Heyder, and others.

Switzerland: Reverdin, Vuillet.

Russia: Slaviansky.

Sweden: Saliss, Westermark.

Turkey: Chatazian.

Holland: Stokvis, Treub, Nyhoff.

Austria; Pawlik, Albert, Chrobuk.

Finland: Engstrom, Heinricius, Pippingohold.

Norway: Statfeldt, Howitz, Meyer.

All communications to be addressed to the American Secretary. Further details will be furnished as soon as received.

DR. JACOBS, Secretary General,
12 Rue Des Petits-Carmes, Bruxelles.
DR. F. HENROTIN, American Secretary.
353 La Salle Ave., Chicago.

FLINT CLUB OF BALTIMORE.—The medical organization, bearing this name, is a coterie devoted to gastronomics and diversion. Its membership of thirty or more hold monthly reunions where medical talk is tabood; all professional cares and successes are alike forgotten for a time at the portal. Whatever may have been the intention of the members when they named the club in honor of the dignified and stately Flint, the appropriateness of the appellation to person honored is not always visible. The plainest kind of English is spoken to the guests—freely enough admitted, if they are willing to submit to the initiatory rites—and to the members who make any remarks that are not absolutely original. The etiquette of the club must be observed by guests whether they comprehend it or not. On one occasion a visitor was called upon to speak and to hush at the same moment—and he complied by addressing the members in the sign language, and by so doing for once staggered his hosts. Sociality is a strong feature of Baltimore life, and helps that city

to maintain its rights to the proud position once given it by Dr. Oliver Wendell Holmes, namely, that of being "the gastronomic hub of the Universe." Along with this trait go hospitality and the *savoir vivre* that are proverbial. The physicians, too, says the *Maryland Medical Journal*, are true to their environment and live together in amity and cordiality; professional discrepancies and gossip are at the minimum, and kindly ethical relations are the rule of life. So that Baltimore is the suitable place for a company of social, clever and prosperous physicians to set up their altar under the name of Flint Club.

The Pan-American Medical Congress on the Leeward Islands, West Indies.—At a meeting of the medical men of this Island, Dr. Branch, President of the Leeward Islands Branch of the British Medical Association, in the chair. Dr. Hutchinson, of the United States, Assistant Secretary to the Executive Committee of the Pan-American Medical Congress, explained the objects of the congress, and invited the doctors of St. Kitts-Nevis to join.

Proposed by Dr. Fueman, seconded by Dr. Nety, "That this meeting cordially approves of the aims and objects of the Pan-American Medical Congress." Carried.

Nem. Con. All present were enrolled as members.

It was agreed to ask Dr. Hutchinson to appoint Dr. Branch a foreign member of the Executive Committee of the Congress and Drs. Boon and Mapleton, secretaries.

The doctors present promised to support the congress and further its aims and objects.

A. Boon, M.D., Secretary.
Fellow of the Royal College of Surgeons, England.

SELECTIONS.

The University of Dorpat, in the Baltic provinces of Russia, which has hitherto had German professors, and has been attended by German-speaking students, is to be Russianized, the Government having given notice that after a certain date, in the near future, only the Russian language will be allowed in the lectures and examinations.

Profit Sharing.—In a very comprehensive study of the economic distribution of earnings versus profit sharings (*Social Economist*), Mr. Alfred Dodge states that "improved machines can be invented and manufactured, but improved laborers can only be developed. One may work a machine till it breaks down, then have a new and perhaps a better one made to take its place. But this is not true of labor. If laborers are poorly paid and overworked, and ill housed, they not only become less efficient themselves, but their children, who are to take their places, will be no better, and sometimes even worse. In this way the development of superior laborers, to say nothing of superior citizens, is prevented." In the same manner, poorly paid and overworked doctors are apt to become less efficient, and this condition is directly traceable to that of the laborers.

Boston Bath House Company.—A company is soon to be incorporated with the above title, to establish baths for the poor of Boston, following the steps of the chief European cities, and the recently established People's Baths in New York. There is already a small establishment of this kind in Boston where, during the first year, 3,000 men, women and children made use of it. It is hoped that after the baths are established they will be self-supporting. About $40,000 are needed for the establishment of the institution.—*Boston Medical and Surgical Journal.*

To Detect Sugar in Urine.—Flint describes a simple apparatus for detecting the presence of sugar in urine, when the results of Fehling's test are uncertain. A small straight bottle or a small test-tube is fitted with a cork, through which is passed a small tube that reaches nearly to the bottom. The glass tube is bent so that the apparatus will hang over an ordinary test-tube or other convenient vessel. The bottle is completely filled with urine, with which a piece of Fleischmann's yeast, about the size of a pea, has been thoroughly mixed. In putting in the cork it is necessary to be careful to exclude every bubble of air. If the apparatus be kept for a half-hour at a temperature of from 80° to 90° F., a bubble of gas will appear if sugar be present in the smallest quantity. The apparatus may be placed in the sun or near a heater, but the temperature should not be higher than 100°.—*Boston Medical and Surgical Journal.*

The Mongolian Eye.—Kômoto[1] has studied in detail the differences between the characteristic eye of the Mongolian nations, and of the Caucasian race. The difference between the two is caused neither by the size of the eyeball, nor the color of the iris, which is the same in both, but in the shape of the eyelids. The epicanthus, a fold of the skin covering the inner canthus, is rare in adult white persons, but exists physiologically among the Japanese, so that it is sometimes called the Mongolian fold. In the majority of cases, this fold runs obliquely inwards and downwards from the upper lid, so that the inner canthus is not round, as in white people, but is sharp. When the fold is large it spreads to the inner part of the lower lid, in which case the upper lid does not cross the cornea horizontally, but obliquely, giving the peculiar expression to the eye often met with in Japanese.

Another peculiarity of the upper lid in Mongolians is the lack of development of the orbital furrow, the groove below the eyebrows. The skin covering the upper lid is very loose, so that when the cartilage is raised, the skin is thrown into a transverse fold. When this fold is well developed, it droops slightly over the margin of the lid. This interferes with the eyelashes, directing them downwards instead of forwards.

In Japanese the cilia are short and straight. On the lower lid they are sometimes so badly developed and so few in number that they appear at first to be absent. When well developed they are sometimes bent inwards by the peculiar formation of the upper lid, and may seriously irritate the cornea. Except for this, there is no great difference in the lower lid of Mongolians and Europeans. The margin is generally more curved in white people, so that there is often a portion of the sclerotic exposed between the lid and the cornea, a peculiarity, the author remarks, which makes "their eyes looking apparently upwards generally." As the skin of the lid is less firmly connected to the subjacent tissues in the Japanese, entropion is more common, but ectropion less common, among them than among Europeans.—*Boston Medical and Surgical Journal.*

Forced Extension in Tabes Dorsalis.—Yet another violent method of treatment has been proposed for tabes dorsalis. The originator is an Italian surgeon, Pietro Bonuzzi, and the plan has been tried by him and also by Dr. Benedikt, of Vienna. It consists in applying forced extension to the spinal column, and has the advantage of requiring no special apparatus, as did the other mechanical treatment—namely, suspension. All that is necessary is to seize the feet with a towel, and carry them forwards so that the knees touch the patient's forehead, the head being raised by a cushion. Bonuzzi has found that by this method an elongation of the cord is produced which is from three to four times as great as that effected by suspension, and claims that the effects are correspondingly more brilliant. Patients who, before treatment, could neither walk nor stand steadily, could afterwards take long walks and stand easily with their

[1] Sei-I-Kwai Medical Journal, December 26, 1891.

eyes closed. Great caution appears, however, to be necessary, for Benedikt reports rachialgia, swelling of the thighs, and muscular hæmorrhages in some cases after treatment, and, in one instance, fainting and a general adynamic condition with vomiting, which lasted several days.—*British Medical Journal.*

RICKETS A PARASITIC DISEASE.—To the list of ills to which our humanity is the inevitable but unwilling heir, owning a microbe origin must, according to Mercoli, now be added rickets. This observer has already, he submits, in a series of anterior researches, traced sciatica, chorea, and hydrocephalus to their microbic sources. Continuing his investigations in the cases of children dead of hydrocephalus and rickets, he confirmed his previous conclusions, and has, moreover, he affirms, succeeded, after examining and submitting to bacteriological methods the costal nodes peculiar to rickets, in obtaining pure cultures of a specific microbe. In adults, according to this observer, the microörganism of rickets produces merely local symptoms; but, in the case of young children unaccustomed to the presence of these microbes, the affection is at first general, finally localizing itself where functional and formative activity is most intense—viz., in the osseous and nervous systems.—*The Lancet.*

HERTWIG'S THEORY OF IMMUNITY.[1]—The theory of immunity recently propounded by Prof. Oscar Hertwig, the eminent anatomist and embryologist at Berlin, is especially worthy of note, not only because of the source from which it proceeds, but because it is an ingenious attempt at mediation between the contesting cellular and chemical hypotheses. Hertwig takes his stand upon the highly important discoveries of Pfeffer, Stahl, Gabritschewsky and others, regarding the influence of various chemical substances upon microörganisms.

The distinguished plant physiologist, Pfeffer, as is well known, found that certain chemical substances soluble in water exert an influence, part attracting and part repelling, upon freely motile plant or animal cells such as infusoria, spermatozoa, bacteria, leucocytes and their like. This phenomenon of "chemotropism," or "chemotaxis," is positive if the organisms advance towards the place from which the chemical stimulus proceeds, negative if they retreat from it. Malic acid in high dilution, for example, exercises a generally positive chemotropic effect, chloroform, a negative. That these terms "positive" and "negative" have only a relative value, is shown by the fact that while a very weak solution of malic acid will attract motile organisms towards the capillary tube in which it is placed, a stronger solution—5 per cent.—will actively repel the organisms. That is to say, the positive effect becomes a negative one as a result of the concentration of the chemical substance.

Furthermore, to continue with the example of malic acid, if the organisms are *ab initio* in a solution containing malic acid, a stronger solution of that acid will be required in order to attract them than is the case if they are in pure water. A solution of malic acid of sufficient strength to attract organisms from pure water will have no effect upon organisms already immersed from the start in dilute malic acid. On the other hand, a solution so strong as to repel organisms in pure water will, in dilute malic acid, attract them. The spermatozoa of the fern, to use the classic example, when in a weak solution of malic acid, are attracted by a solution so strong as to repel the spermatozoa when the latter are in pure water.

Negative chematropism may therefore, under changed conditions, become positive. This fact is of cardinal importance in Hertwig's conception of immunity.

The white cells of the blood are apparently very susceptible to chemotropic influences. The metabolic products of pathogenic bacteria—whether "ptomaines," "toxines," or something else—exert in general, a positive effect upon the leucocytes, and so draw them towards the source of the stimulus, that is to the "inflammatory centre."

Hertwig points out that the numerous chemotropic possibilities group themselves under two heads. In the first place, the metabolic bacterial products may be present in the blood and in the diseased tissues in almost or quite equal proportions. In this contingency there will be no effective chemotropic stimulus, and the leucocytes will consequently not be drawn towards the affected locality.

In the second place, the substances accumulated in the blood and diseased tissues are of different degrees of concentration in the two places, and this difference causes a chemotropic movement of the leucocytes. Here there are obviously two possibilities, either the higher concentration exists in the blood or in the diseased tissues. In the latter case the leucocytes are drawn into the affected locality; this is perhaps the most ordinary and well-known condition—as in suppuration. In the former case the leucocytes, which in other conditions might have gathered in the diseased area, are retained in the blood-vessels.

In Hertwig's opinion, the action of Koch's tuberculin can be best explained by reference to some such chemotropic phenomena. Suppose that the metabolic products of the tubercle bacilli are in so high a degree of concentration in the tissues as to exert a repellent, or negatively chemotropic effect upon the leucocytes, which, in consequence, shun the affected area. On the injection of tuberculin into the blood the leucocytes, after the analogy of the spermatozoa and malic acid, become attracted by the bacterial substances in the tissues which were formerly so relatively concentrated as to repel. In this way Hertwig thinks to explain the reactions following the introduction of tuberculin into the blood. On this assumption also he believes it possible to explain many of the perplexing and disastrous consequences of injections of too large quantities of tuberculin. He concludes that Koch's application of tuberculin injection "rests upon a thoroughly sound physiological foundation."

Hertwig's further treatment of the subject ventures upon the much controverted ground of the phagocyte theory and its implication. He considers that Metchnikoff's view is essentially correct, and refers the artificial production of immunity to the greater sensitiveness which the leucocytes have acquired toward the bacterial products, and consequently toward the bacteria themselves. The arguments presented in support of this view are perhaps more ingenious and suggestive than convincing.—*Boston Medical and Surgical Journal.*

NOVEL TREATMENT OF NEURASTHENIA.—Hypodermic therapeutics continue to grow in favor. This applies not only to the chemical substances of the Pharmacopœia, the hypodermic administration of which has in recent years so much extended and is now firmly established, but bids fair to take a new departure on the lines advocated by Brown-Séquard. In this latter connection M. Constantin Paul, at a recent meeting of the Academy of Medicine, related his observations of a certain number of cases which he had treated by injections of a preparation of nervous substances into the subcutaneous cellular tissues. The patients over whom his observations of this novel therapeutic method extended numbered eleven, which he classified as three of chlorotic neurasthenia, three of classic neurasthenia, one case of permanently slow pulse, and four ataxics. The liquid used was a solution

[1] Ueber die physiologische Grundlage der Tuberculinwirkung; eine Theorie der Wirkungsweise bacilläres Stoffwechselproducte, Jena, 1891.

of 1 in 10 of cerebral gray matter taken from the sheep, sterilized by carbonic acid in Arsonval's apparatus. This solution was injected in the gluteal region, the dose being 5 cc. It was well borne, producing no reaction, either local or general. Occasionally a slight lymphatic engorgement was noticed, which disappeared in four or five days; but in the 200 injections to which the eleven patients were subjected, in no case was there abscess or other local inflammation. The first sensation experienced by the patients was one of comfort and returning strength, the previous muscular weakness diminishing sensibly. The vertebral pains and spinal hyperæsthesia, and, in the case of the tabetics, the lightning pains, disappeared gradually. Appetite for food also came back, and those of the patients who were previously dyspeptic now assimilated their food so well that they began to increase in weight. In the ataxics sexual power returned with the general amelioration. M. Paul concludes from these considerations that in injections of gray cerebral matter we have a nervine tonic of no mean order. He compares a neurasthenic with an accumulator which it is impossible to charge; while the condition lasts he is unable to transform his food into force. After the least effort his muscular and intellectual forces are exhausted. But the injection of nervous matter in the manner indicated promotes the utilization of food and its due assimilation; so that the nervous system now becomes a condenser, which, if charged, the subject acquires force which he can dispose of at will. It is to be noted that it is the nervous force which first returns in all these cases. Following this, and as a consequence, the power to do intellectual and muscular labor comes back; the improvement in the condition of the blood follows later on. In conclusion, M. Paul expresses his conviction that this new therapeutic departure will be found to ameliorate the neurasthenic condition much more rapidly than the methods of our ordinary materia medica—an opinion which strikes one as being rather sanguine.—*The Lancet.*

Lactate of Strontian in Albuminuria.—M. Constantin Paul reports that he has used this drug in cases of albuminuria, both of cardiac and renal origin, and has found that it causes a marked diminution of the amount of albumen passed. This result he attributes to the aid which the medicine affords to the digestive function, causing the food to be more thoroughly digested, and therefore not so many toxic substances formed and absorbed into the blood. He gives the remedy in doses of about 1½ drachm, by day in separate doses.—*Provincial Medical Journal.*

An Unpleasant Delusion.—In the *Times* of January 28, it is mentioned in the telegram from Russia that the peasants of the parts most affected by the present terrible famine have conceived the idea that it is the doctors who are to blame. In some places it seems to have become very lively for the medical men.—*Provincial Medical Journal.*

Influenza and The Barometer (*L'Union Médicale*, December 1891).—M. Masson has made researches in the meteorological conditions observed during the influenza epidemics, and finds that in general the exacerbations of the disease coincide with a damp, raw condition of weather, not very cold, but with an elevated condition of the barometer, thus indicating increased atmospheric pressure. This rule he found to hold good in Vienna, Berlin, Brussels and Paris, but not in Russia, where the disease is endemic. In that country the mortality increased when the barometer went down, but there was an augmentation of moisture in the air. M. Masson has shown by diagrams that the curves of mortality and those of the oscillations of the mercurial column coincide nearly exactly week by week, their maxima and minima corresponding. [There is a possibility of error here. Death from such a disease as influenza does not occur directly a patient is attacked, and it does not follow that because the high barometric readings correspond with the days when most deaths occur, that the disease is then exerting its greatest force. The readings of the mortality curves should be examined for a few days at least before the maxima are reached.—*Reporter.*]—*Provincial Medical Journal.*

Three Kinds of Favus. By Dr. P. G. Unna (*Fortschritte der Medicin*, No. 2, 1892). (Original.)—Quincke was the first one to ask whether there existed more than one kind of favus. If it can be shown that there are several kinds, the clinical shortsightedness must have been great, for the unity of favus, a disease known for fifty years, had never been questioned. Assisted by Drs. Frank, Williams, Roberts and Douglas, Unna came to the conclusion that there are at least three kinds of favus, which he named as follows: Favus griseus, F. sulfureus tardus, F. sulfureus celerior. He describes the respective scutula as they appeared on mice. The corresponding fungi are as follows: Achorion euthythrix, A. dikroon (not dichroon), A. atakton. This is also Unna's nomenclature. The experiments were carried out on the investigators themselves, on mice, on rabbits, etc. The mouse which falls a victim to favus, is eaten by its companions, and the author considers this is the most likely explanation of the spread of the disease. From his experience, mere contact does not appear to produce the disease as frequently as he had thought on *a priori* grounds. Two of the above kinds of favus have already been observed on mice in the free state. There is a colored plate showing scutula of F. griseus and F. sulfureus celerior side by side on the human skin; also an illustration of F. sulfureus tardus on the head of a mouse.—*Provincial Medical Journal.*

Tennessee State Medical Society.—The fifty-ninth annual meeting of this grand old medical organization is near at hand, the time fixed being the second Tuesday in April (12th), and the place, the beautiful, romantic and most hospitable city of Knoxville, whose citizens have no equal on the face of the earth for their unlimited hospitality, and a courtesy and gallantry worthy of Admiral Critchton himself. Of the beauty of the fair daughters of this gem city of the mountains, words are incapable, and the mind can only conceive, after the eye has beheld, the extent of their loveliness and grace.

I confidently expect to see good and earnest work done at this meeting, all along the line of medical progress. One subject in particular, I would like to see early and properly considered, and a strong and emphatic endorsement given to the creation by our national government of a "Secretary of Health," *a member of the President's cabinet;* legislation looking to this end, now pending before the United States Congress, may result in a success that will prove of untold value to the men, women and children of this great country, and those who come after them, if it receives that endorsement the occasion demands from the profession throughout the Union.—*The Southern Practitioner.*

Therapeutic Action of Certain Herbs and Vegetables. Thyme, marjoram and sage are digestive tonics and antispasmodic. Sage is also slightly astringent and diaphoretic and in an infusion of 30 grams to half a litre of water is an excellent drink in cases of common cold. Saffron is not used as much as formerly as a medicine, and very little, if at all, in cooking, yet it is useful as a stomachic in nervous dyspepsia, and as a stimulant drink for children. Anise seeds are carminative and tonic; vanilla, and all spices, such as pepper, ginger, etc., are good digestive stimulants. Ginger has diaphoretic properties; cloves and cinnamon are astringent and antispasmodic, relieving nausea and flatulency in dyspepsia.

Nutmeg is a good digestive stimulant if used in moderation. Water cresses, celery and chicory are tonic, diuretic, and useful in rheumatism and nervous disorders. Carrots, radishes and turnips are laxatives and diuretic. Italian singers drink the juice of cooked turnips for impairment of voice. Beets are nourishing, and laxative. Jerusalem artichokes are useful in rheumatism, as well as celery, radishes and asparagus. Potatoes are nourishing and slightly sedative. Cucumbers are purgative, tomatoes healthy and refreshing when eaten raw, because they contain mineral salts and a volatile oil which is lost in cooking. Lentils are very nourishing; lettuce is diaphoretic, slightly narcotic, and has a favorable action on the digestive organs. All kinds of onions constitute a valuable food. Garlic, which has a stronger effect than other varieties of onions, when roasted and applied as a poultice, is an excellent remedy in cases of sore throat, earache and toothache. Crushed and applied to the soles of the feet it excites the circulation and nervous system; administered internally it is a good stomachic, expectorant, and antispasmodic, arresting convulsions in children and inducing sleep. Horse-radish is a digestive stimulant of great value, especially useful in scurvy and rheumatism. Mustard is tonic, stomachic and stimulant either in the form of the seed or powder; it is also an efficient emetic. All kinds of pepper are serviceable in malaria and dyspepsia, cayenne pepper being the most useful.—*Journal de la Santé.*

SUMMER DIARRHŒA OF INFANTS.—Clinical experience, as shown in the successful treatment of gastric disorders by irrigation of the stomach, and the antiseptic treatment of the entire alimentary canal, forces the conviction that these disorders which are under discussion are the result of decomposition processes, which are caused by bacterial agencies. Starting with the hypothesis that the contents of the alimentary canal are the substratum from which the intoxication which gives rise to gastrointestinal disease proceeds, the following questions are submitted:

1. Do the contents of the stomach in dyspepsia in young children have a relatively greater quantity of microörganisms than the contents of the stomach of healthy children?

2. Is there a relation which can be determined between the relative quantity of germs in the stomach of sick infants and the intensity of the disease from which they are suffering?

3. What are the relations between the relative quantity of germs in the contents of the stomach and the intensity of the disease on the one hand, and climatic factors, which influence the destruction of the milk, the factor of temperature particularly, on the other hand?

To answer the foregoing questions, a quantitative bacteriological analysis was necessary, of contents taken from the stomach of a living child.

Investigations of this character on an extensive scale were made by the author, and from these it was concluded that in the acute dyspepsias of infants one has to deal with spores, which are antagonistic to the acid of the contents of the stomach, are introduced with the nutriment, and develop luxuriantly at the temperature of the body. The phenomena of severe dyspepsias, and especially those of cholera infantum, are the phenomena of acute intoxication; hence, it is reasonable to seek for the cause of the disease in the poisons generated by the saprophytes of the contents of the stomach.

These diseases are most destructive at the time when high temperature, through the action of microörganisms, works destructive changes in food substances, and almost disappear when the weather becomes cool. There are also cases which have the character and etiology of general infectious diseases.—*Jahrbuch of Kindersheilk.*

A SECRETARY OF PUBLIC HEALTH.—Yes, there is now a nearer possibility than ever before of securing legislation of the most vital importance to the people of this great country.

Senator Sherman introduced, December 10, a bill to establish a Department of Public Health, under the charge of a medical officer to be appointed from civil life by the President. This department shall obtain from consular officers at foreign ports all information available in regard to the sanitary condition of such ports and places, and also all information accessible from State and municipal authorities of the sanitary condition of places within the United States. All information gathered to be embodied in the form of a bulletin and transmitted weekly to the marine hospital service, collectors of customs, and to State and to municipal health officers. The department also shall, as far as it may be able, procure and tabulate statistics relating to marriages, births, deaths, the existence of epidemic and other conditions affecting public health. The department will coöperate with State Boards of Health, the Signal Service, medical department in the army, and other branches of the government, and utilize the researches so as to make the department a repository of public sanitary comfort. All rules governing the service are to be framed by the medical officer in charge, and are to serve for the instruction of consular officers abroad, and for masters of sailing vessels bound for the United States from foreign ports.

This bill has received most favorable endorsement from other United States Senators, and in all probability will pass satisfactorily before the higher branch of the National Legislature, there being a Republican majority.

For many years I have been much interested in this movement. In my address before the general session of the American Medical Association at its meeting in Washington, in 1884, I devoted the greater part of the time allotted me in a consideration of this subject, and advanced arguments that have not yet been refuted. I have, from time to time, advocated this measure since, in the editorial pages of this journal, and I defy any one to deny or adduce argument of validity in refutation of so rational a movement of progress.

In my private correspondence on this subject I had the statement from one high in authority, a recognized leader for many years in the Democratic party, that "the measure was a dangerous one, as it might interfere with the time-honored doctrine of the Democratic party in regard to 'State Rights.'" Bah! away with such sophistry. Does the Attorney General of the United States in any way interfere with this principle? There he has stood, a representative of his party for years past, at the head of the legal and judicial affairs of this great nation, the legal adviser of the President and of Congress. Has he ever dared to step beyond the protective barriers of the Constitution?

Again, it has been suggested that the appointee of the President of the United States might not be a suitable or an efficient officer, or might use his office to perpetuate his party in power. Had this ever been demonstrated as a matter of fact in regard to the appointment of other Cabinet official positions, they would have been abolished or modified long ago. Yes, as with the Department of State, of the Treasury, Army, Navy, Justice, the Interior and Agriculture let the people hold the President to a strict accountability as to the capabilities, the qualifications, and the integrity of each of his appointees, and let him hold the appointee responsible for the discharge of the duties of his particular department.

If epidemic invasion or endemic disease had any respect for State rights, there might be some slight or *quasi* reasoning against this measure on this ground. If these terrible scourges could be controlled by individual, local, municiple,

county, or State officials, then there would be no reason for such a measure.

In the early days of this republic there was no need for a Secretary of the Interior, "yet as Time put his sickle in among the days," the area of territory and number of population increased, the need arose, and was timely met by the members of our National Legislature. So, also, as to the Department of Agriculture. And now that we have increased from 3,000,000 to nearly 70,000,000 people, with many large centres of dense population, with a vast influx of emigrants continually pouring into our ports, with our immensely increased commercial relations with other nations, with the vastly improved means of rapid transit from other countries to this, and from one part of this country to another, there is a most imperative demand that a measure of so momentous an import to our entire people should receive that consideration it so justly merits at the hands of our law-makers.

I am gratified, indeed, to see that many of the leading medical journals have recently been considering this subject, and favorably; and I sincerely hope that every member of the committee appointed at the last meeting of the American Medical Association, with Dr. C. G. Comegys, of Cincinnati, as its chairman, will consider this an individual matter, put his shoulder to the wheel and at once go to work, and continue at it tirelessly and unceasingly until we have what our entire people need, irrespective of party, creed, or previous condition—a national Secretary of Public Health. —*The Southern Practitioner.*

Public Test-offices.—An important feature of the work to be done at the hygienic laboratory at the University of Michigan, at Ann Arbor, is the examination, at a nominal fee to cover actual expenses, of articles of food and drink, on request of health-officers throughout the State. Such work is already done to a limited extent, but it is proposed hereafter to enlarge its usefulness by making it available to sanitary officers of the State.

The usefulness of such a laboratory could be still further extended by allowing citizens generally the privilege of having tested, at a nominal cost, not only suspected articles of food, but such articles of domestic use, as are liable, at times, to contain poisonous substances. For a number of years there has been established in Paris a public test-office, where all articles of food, beverages, etc., are analyzed and tested by experts, who also perform the duties of inspectors of markets and among the tradesmen. For a nominal sum, and in some cases gratuitously, anyone can ascertain the composition of any suspected article of food. Articles of domestic use, clothing, colored toys, wall-papers, etc., are also examined, in order to detect any poisonous ingredients that may be present.

The establishment of a public test-office would excite popular interest and be the means of instructing the people in matters closely connected with their physical well-being. Indifference to causes acting injuriously upon health is rightly attributed to the want of proper knowledge. The chrome-yellow poisoning in this city some years ago would never have reached the proportions it did, had the people been in possession of the knowledge that leads to suspicion.

It is very necessary to have test-offices and inspectors to search for deleterious articles of food or of domestic use, but it is quite as important to secure the coöperation of the public and keep active their interest in measures employed to prevent the sale or use of such articles. The public should be made to assume a share of the responsibility of noting and reporting suspected articles, and in no better way can this be accomplished than by offering free facilities for investigation.

The moral effect of establishing a bureau of investigation would be repressive if not preventive of practices now foisted upon the masses because of their supineness and lack of information. By freely offering the services of experts, the coöperation of the public would be secured, and as a result greater progress would be made not only in detecting, but also in breaking up harmful practices that are none the less common because they so generally escape notice.—*Medical News.*

Chronic Ostitis and abscess of the Tibia of Long Standing.—The following case appears to me a most interesting one, as showing the prolonged duration of chronic inflammation of bone, and the liability to the intercurrent formation of abscess.

The patient, a gentleman forty years of age, suffered a fracture of the tibia when seven years of age. Whether the fracture was compound or not he does not know, but I infer from his history that it was. It was followed by severe inflammation and necrosis of a portion of the bone. Ever since this early accident, he from time to time has experienced more or less pain at the site of the fracture, which was near the junction of the lower with the middle third of the tibia, and slight pressure has always been sufficient to make him wince. He states that ever since the accident the lower portion of the bone has been quite tender, and has troubled him a great deal during change of weather. About six years ago he began to have pain in the upper portion of the tibia, principally marked at the articular extremity; more or less swelling was perceptible, and has continued to the present time. There have been occasional exacerbations, with quite acute pain. There is no history of syphilis, or any infectious disease, save scarlet fever in his youth. During the exacerbations of pain and swelling the patient has been compelled to use crutches. Within the last few weeks the pain has been exceptionally severe, and the difficulty of locomotion more marked than at any previous time.

At present the entire tibia is swollen, its diameter being fully double the normal; the muscles of the limb are atrophied from disuse, and possibly the reflex effect of the osseous inflammation and consequent disturbance of nutrition; there is excessive tenderness over the tibia, particularly marked at its upper and inner aspect. In this situation a marked nodular swelling exists, indicating a subperiosteal bony deposit. Another spot of a similar character is discoverable near the site of the old fracture. Numerous cicatrices adherent to the bone are present over the anterior surface of the tibia at points from which the patient says dead bone has been removed, or has escaped spontaneously from time to time.

The diagnosis is chronic ostitis, with osteo-sclerosis of considerable extent, and a probable abscess (possibly a sequestrum) in the upper cancellous extremity of the bone.

A free incision was made in the entire length of the tibia. The periosteum was found greatly thickened throughout. Subperiosteal nodes were discovered at the site of the thickening described; these were perceptible before the operation. The periosteum was peeled back and the bone exposed, and found to be of the peculiar ivory-like consistency and appearance characteristic of osteo-sclerosis. After considerable gouging and chiselling through the hard, ivory-like structure, an abscess was exposed in the upper extremity of the bone, which contained about a tablespoonful of moderately thick pus and was lined with a thin layer of granulations, and was evidently of quite recent formation. This abscess was probably tuberculous. No examination for bacilli was made, however. It was probably the result of a secondary tuberculous infection. The cavity was thoroughly cleaned out, and the bone drilled with a small drill in

various directions surrounding the cavity. A linear osteotomy was performed through the lower portion of the bone, and the subperiosteal nodes thoroughly chiselled away, with removal of enough of the ivory-like bone beneath them to insure repair. The cavity is filling up nicely, and the pain is completely relieved. The result, undoubtedly, will be restoration of the limb to its normal degree of usefulness.—G. Frank Lydston, M.D., in *Medical News*.

IMPORTANT TO ST. LOUIS MEDICAL STUDENTS.—Action of great importance to medical schools in general, and to those of St. Louis in particular, was recently taken by the Oregon Supreme Court. The State Board of Health had adopted a rule defining a medical institution in good standing to be one requiring three regular courses, or sessions, of six months each, extending over a period of three years' time. A physician named Barwood was refused a certificate on the ground that the school from which he had graduated did not have such three years' course. He brought the case before the Circuit Court, and a decision adverse to the power of the State Board to make such distinction was rendered. On appeal to the Supreme Court this decision was overruled and the authority of the State Board was sustained. This decision will go far toward settling the disputed question of the authority of State Boards of Medical Examiners to make such rules. By the close of the present year the requirement of a three years' course of study before a certificate is granted will be in force in three-fifths of the States of the Union. There are three medical colleges in St. Louis: the College of Physicians and Surgeons, the Marion-Sims Medical College, and the Beaumont College. In all of these the two years' course prevails. Unless this is altered, graduates will find more than half the States closed against them.—*St. Louis Post Dispatch*.

ON THE LOCAL APPLICATION OF CHROMIC ACID IN THE TREATMENT OF SYPHILITIC AFFECTIONS OF THE ORAL CAVITY. By Dr. E. Feibes, of Aix-la-Chapelle (*Therapeut. Monatshefte*, November, 1891).—The author defends the local application of chromic acid in syphilitic affections of the mucous membranes. In his opinion no other treatment can compare with it. Nitrate of silver is laid aside and banished. Chromic acid applied locally, combined with general treatment, cures in a very short time the most obstinate ulcers, white patches (after previous scraping with the sharp spoon), fissures at the angles of the mouth, specific geographical tongue (lingua geographica), psoriasis of tongue and specific ulcers of the tonsils. The treatment of mercurial stomatitis appears to be very good. Whenever inunction of mercury is resorted to, the mouth is cleansed with tooth-powder and mouth-wash (chromic acid compounds?) In bad cases of stomatitis, Feibes, by means of a fine probe, armed with wool, clears away the putrefying, stinking masses from between the teeth and gums. He then applies in a similar way wool dipped in a concentrated solution of chromic acid, after previously painting the parts with cocaine. In this way it is never necessary to suspend the general treatment. The mouth is washed out after each application of chromic acid with aq. chloroform. (Von Boltenstern, *Fortsch. der Med.*, No. 3, 1892.)—*Provincial Medical Journal*.

CONCERNING MULTIPLE NEURITIS. By Dr. J. Pal (*Wiener klinischer Wochenschrift*, 1891).—The author remarks that our knowledge of multiple neuritis has been obtained for the most part during the past ten years, and pathological cases, which were then unexplainable, now appear apparent.

The history of each of the cases are related, and concerning their etiology, they are those agents which we ordinarily attribute to be the causation of the disease. For instance, two cases were due to alcohol, two more due to specific diseases, erysipelas and typhoid fever; one from exposure and one from arsenical poisoning. In the remaining one the etiology was obscure.

After the death the nerves examined, such as the optic, motor oculi, abducens, facial, auditory, radial, peroneal, and in some cases the phrenic and pneumogastrics, etc., showed quickness of degeneration, with the exception of the auditory. In the spinal cord the posterior root nerves were found diseased, as were the postero-lateral columns from the dorsal region to the medulla. The posterior median columns showed very small degeneration tracts over a corresponding area. The ganglia on the posterior roots were normal apparently, and it is to be remarked that neither the fibres of the posterior roots going to the Spitzka-Lissatuer columns, nor the columns themselves, were affected. In the cervical region the direct cerebellar tract was degenerated and going downward. The crossed pyramidal tracts showed similar changes, particularly in the cervical and upper dorsal. The direct pyramidal tract showed only slight changes, and this but in a very small area. After reaching the dorsal segment of the cord, the changes in the anterior white matter seemed to be limited to the crossed pyramidal tracts. In the opinion of the author, these changes were analogous to those which might occur from a focus of diffuse neuritis at the dorso-cervical junction of the cord, but no evidences of such a process could be found. At the end of his article the author expresses his clinico-anatomical results as follows:

1. Multiple neuritis occurs often as a primary affection of the peripheral nervous system, and the changes in the nerves may be independent of any change in the cells of the anterior coronal.

2. In the course of multiple neuritis the central nervous system may become involved, the changes resulting from the same causes that caused the primary disease.

3. Although the funiculus gracilis and funiculus cuneatus may be and frequently are degenerated, this degeneration need not be strictly systemic.

4. The so-called neuritis of tuberculosis shows peculiar clinical symptoms, such as œdema of the feet and diminution of cutaneous irritability to the faradic currents, and these symptoms are sometimes the only indications of the multiple neuritis.—*Jour. of Nervous and Mental Diseases*.

HYSTERICAL ATTACKS ASSUMING THE FORM OF JACKSONIAN EPILEPSY.—Dr. Ballet (*Gazette des Hôpitaux*) calls attention to the fact that while hysteria often resembles the attacks of ordinary epilepsy, it may sometimes approach very closely to the partial or Jacksonian form. He cites the case of a young girl, suffering from "grande hysteric," and presenting the characteristic symptom of left hemi-anæsthesia. She has had the classical "grande attaque" a number of times, but, of late, convulsive seizures of a different nature have made their appearance.

These may be shown by simply rubbing one of the two hystero-genetic zones, to be found on the patient's body, when immediately the head turns toward the left side. Froth appears at the mouth, and the muscles on the left side of the face begin to twitch.

These symptoms, taken together, represent almost exactly a lesion of the motor centre of the face. A circumstance which often renders the diagnosis more difficult is the fact that these attacks are frequently limited to the epileptiform stage, and are unaccompanied by any other hysterical symptoms.

This patient had at one time sixty-two attacks in the space of an hour and a half, but at present the attacks are separated by well-marked intervals, and there are other symptoms such as catalepsy, hallucinations, etc., which render the diagnosis of hysteria easy. The absence of paralysis of the

members affected is also a sign of great value, and, as it is almost always present in true Jacksonian epilepsy, but very rare in the hysterical form.

Still another very important symptom, is that the urea is increased in the urine, which is voided after an epileptic attack, but is diminished in the hysterical condition—*Jour. Nerv. and Mental Disease.*

THE ALTERATIONS FOUND IN THE PERIPHERAL NERVES OF PROGRESSIVE GENERAL PARALYSIS.—The histo-pathological changes occurring in the peripheral and intra-muscular nerves, and to a greater degree in the trunks of the cranial and spinal nerves, consist of a parenchymatous neuritis of peripheral origin. In the various spinal nerves—motor, sensory and mixed—not only are the trophic centres normal, but the anterior roots, and that portion of the posterior roots between the post-spinal ganglia and the junction with the corresponding anterior roots, are likewise normal.

2. The intensity of the alterations is in direct ratio to the distance from the nerve centres.

3. The different etiological factors (alcoholism, syphilis, etc.), and to the various complications (tuberculosis, etc.), must be attributed in all probability the unequal distribution of the lesions, as found in the muscular and cutaneous nerves. How much of these alterations depend upon progressive paralysis and to the various complications is very difficult to determine.

4. The existence of these simple and degenerative atrophies of the peripheral nervous system is constant. The mode of origin is unknown. From the fact that the nerve endings are in advanced stages of degeneration, while the nerve centres and the adjacent nerve roots are unimpaired, it is most probable that the lesion is comparable to an ascending neuritis, beginning at the periphery and ascending centrally.—(Dott. Roselino Colella in *Annali di Neorologio.—Journal Nervous and Mental Diseases.*

THE CENTRE FOR HEARING.—A case of no little interest and importance in this connection is recorded by Dr. C. K. Mills in the current number of *Brain*. The patient, a woman of forty-six, was admitted to the hospital in August, 1891. Her history made it probable that she had suffered from specific disease. She was right-handed. Fifteen years before she had a "stroke," which left her word-deaf, but not paralyzed. She could hear musical and other sounds, but she could not understand words; yet she could apparently read and understand a paper, although in an attempt at reading aloud she made a jumble of the words, and a similar imperfection was present during ordinary attempts at speaking. She was able to write, but wrote wrong words. Six years later she had another stroke, affecting the left side of the body, and leaving her partially paralyzed on that side; then her hearing was much impaired, so that there was not only word-deafness, but deafness also for ordinary sounds. Her condition, when examined by Dr. Mills, was one of almost complete helplessness. It was impossible to make her understand what was said to her, and after repeated tests the conclusion was come to that she was totally deaf. She died of exhaustion, and at the necropsy the left superior temporal convolution was found to be much atrophied, except anteriorly. In the posterior fourth of the second temporal convolution and the parallel fissure was a depression or cavity, at the bottom of which was a small mass of shrivelled tissue, which was regarded by Dr. Mills as the remains of an old patch of softening. The rest of the temporal lobe was normal, but there was a considerable amount of atrophy around the ascending branch of the Sylvian fissure and the bases of the two central convolutions, as well as in the hinder part of the third frontal. In the right hemisphere was an old hæmorrhagic cyst, completely destroying the first and almost completely the second temporal gyrus, the island of Reil, and the convolutions behind, as well as part of the ascending convolutions, and of the central substance. The auditory nerves were atrophied, and the striæ acousticæ are said to have been invisible to the naked eye. From this case Dr. Mills thinks he is justified in contending that the centre for word-hearing is situated in the hinder thirds of the first and second temporal convolutions, and is possibly restricted to the second; and that although the auditory cerebral arrangements have their chief development in the left temporal lobe, destruction of the opposite centre is necessary in order to abolish hearing entirely. Several minor conclusions are also drawn, but the above are the most obvious.—*Lancet.*

ADVANCES IN PHYSIOLOGICAL CHEMISTRY.—The progress of physiology and physiological chemistry gives every now and then a sharp turn to our methods of viewing and treating disease. Thus, for example, in times past the profession has starved fevers, then it has fed fevers, now it is inclined to water them.

Perhaps in no direction have medical views changed more than in regard to the dieting and feeding of the sick, and to the medication of nutritional disorders. For two decades a vast deal of attention has been paid to the subject of making things easy for the stomach. Pepsin, ptyalin, trysin, peptones, peptonic pills, digested and half digested milk and beef, have been prescribed in enormous amounts, and no doubt with some benefit.

But there is a possibility that too much of this sort of thing is done, and that much of the supposed help to digestion given by prepared foods is fanciful. It has been demonstrated beyond any doubt that albumin is absorbed from the rectum and stomach without first being changed into peptone. It is known that the peptones must be changed into serum-albumin before they enter the blood; and finally, there is good ground for believing that all the proteid matter which is used in the building up and repair of tissues comes from albumins which escape being converted into peptone in the alimentary tract. Peptone supplies force, unchanged proteids supply tissue.

A good deal of medication has been based on the supposed fact that the secretions of the intestinal tract are alkaline. The studies of Macfayden, Woricki and Sieber show that this is not entirely true, for the secretion, as found in the lower part of the small intestine, is uniformly acid.

A very important and dominant idea in practical medicine is that the tissue changes of nutrition and function are chiefly oxidations. Hence we insist on fresh air, exercise, and abundant supplies of oxygen. But it is known that synthetic processes also occur in the processes of digestion and absorption, as well as in tissue-making. In digestion, for example, hydration is an important factor, and in the absorption of fats there is a synthesis of fatty acids and glycerine, so that as a result, neutral fats alone enter the lymph. The investigations of chemists have also shown that the liver cells do synthetical or constructive as well as oxidizing work. The old view of Liebig, that our bodies are mainly furnaces, is not, therefore, strictly true, and we are learning to-day that rest is as important as exercise in securing improvement in nutritive functions.

These views, which are in part suggested by an able address of Dr. V. C. Vaughan, of recent progress in physiological chemistry, show that certainty has not yet been reached in our knowledge of diet, digestion and nutrition, and that the modern physician must keep ever alert to the progress made in the physiology and chemistry of the human body.—*Medical Record.*

A SUGGESTION WITH REGARD TO SPRAYING THE NASAL CAVITIES.—Dr. F. A. Burrall, of New York City, writes: "As an aid to thorough spraying of the nares, I have formulated the following method, which originated from a suggestion made to me by a patient on whose nasal cavity I was using the upward spray: Direct the patient to inhale deeply, and place the tip of the atomizer behind the uvula without touching the posterior pharyngeal wall. Then the patient is to close his lips upon the tube and exhale through the nose. This carries the spray well forward upon the walls of the nasal cavities, and when an oily solution is used, such as the extract of pine needles in benzoinol, the volume of spray issuing from the nose resembles that of the air from the nostrils on a frosty morning. This process makes the spraying of the posterior and anterior nasal cavities more thorough than can be done by an ordinary application. It is a method worth mentioning, as there may be some physicians to whom the idea has not occurred, and they will find it serviceable." —*Medical Record.*

DARWINISM SO FAR A FAILURE.—Darwinism has a strong foe in Professor Virchow. The following is an extract from his address on the subject delivered before the Anthropological Congress in Vienna: "Since the Darwinian theory of the origin of man made its first victorious mark, twenty years ago, we have sought for the intermediate stages which were supposed to connect man with the apes; the proto man, the *pro anthropos*, is not yet discovered. For anthropological science the *pro anthropos* is even a subject of discussion. At that time in Innspruck the prospect was, apparently, that the course of descent from ape to man would be reconstructed all at once; but now we cannot even prove the descent of the separate races from one another. At this moment we are able to say that among the peoples of antiquity no single one was any nearer the apes than we are. At this moment I can affirm that there is not upon earth any absolutely unknown race of men. The least known of all are the peoples of the central mountainous district of the Malay Peninsula, but otherwise we know the people of Terra del Fuego quite as well as the Esquimaux, Bashkirs, Polynesians, and Lapps. Nay, we know more of many of these races than we do of certain European tribes; I need only mention the Albanians. Every living race is still human; no single one has yet been found that we can designate as simian or quasi-simian. Even when in certain ones phenomena appear which are characteristic of the apes —*e. g.*, the peculiar ape-like projections of the skull in certain races—still we cannot say that these men are ape-like." —*Medical Record.*

THE PUERPERIUM AS A FACTOR IN THE ÆTIOLOGY OF MULTIPLE NEURITIS AND DEGENERATIONS OF NERVE TISSUE.—H. Handford, M.D., in the *British Medical Journal*, November 28, 1891, reports two cases of multiple neuritis, both probably of alcoholic origin, where the onset seemed most clearly to be determined by childbirth. He mentions a third case where the exact diagnosis was more difficult, but its onset immediately following confinement was equally clear. After quoting Gowers' suggestion in this connection that "the tissue health is lowered, and hence slighter causes excite neuritis," he says the rapid progress of tabes dorsalis, and the frequency of optic atrophy in it when sexual relations are actively maintained, has been frequently noted. The relation of child-bearing is probably of a similar nature, and it is not suggested as a sufficient cause *per se*. On the other hand, child-bearing is a common occurrence, and the neuritis may have been a coincidence, but multiple neuritis is a comparatively rare disease, and for three out of six or seven cases, in both sexes, to commence with childbirth seems an undue proportion. The author then asks "is the influence of childbirth one of the factors which render alcoholic neuritis so much more common in women than in men, while drinking habits are more prevalent in the latter?—*Journal Nervous and Mental Diseases.*

THE SULPHATE OF DUBOISIA IN MENTAL DISEASES.—Preiniger has used the sulphate of duboisa as a calmative and hypnotic in mental affections with good results. The action of this agent much resembles that of hyoscine, while its inconveniences when given in too strong a dose are the same. When administered to an insane patient, sleep sets in in from ten to twenty minutes, and lasts from one to eight hours. Sometimes the sleep is of short duration, yet, on awakening there persists a somnolent condition and prostration which more or less takes its place. If the dose be larger than two and a half to three mgrms, the patients become agitated, the extremities jerk, the pulse becomes accelerated, the respiration increases in frequency, and the temperature rises—even hallucinations may set in. The peculiar idiosyncrasies of patients with regard to occustecination, and its intensity of action should be borne in mind. The maximum dose for subcutaneous use, and which should not be increased, is two mgrms. Administered by the mouth it sometimes does not act.—*Le Bulletin Médical.—Journal Nervous and Mental Diseases.*

THE TOXIC ACTION OF IMPURE CHLOROFORM.—It has been an axiom for years that in the administration of chloroform for anæsthesia the purified drug only should be employed. This has been founded in part upon observation and in part upon a knowledge of the irritative effects of some of the impurities in commercial chloroform. Prof. Pictet's recent method of refining chloroform, mentioned in the *Journal* for December 12, gives a very pure chloroform and an impure residue. Dr. Rene du Bois-Reymond has recently published in the *British Medical Journal* the results of his experiments upon the physiological action of the residue as compared with that of the purified drug, cardiographic tracings being made of the tracings of the hearts of frogs placed under covered dishes with both liquids, and manometric and expiratory tracings being made from rabbits inhaling the drugs through a tracheal canula.

These experiments corroborated those already made on the action of chloroform in general, but, on comparing the pure with the impure drug, no difference was found in the shape of the pulse waves or in the frequency of respiration. With the residue at the close of experiments, the pulse was higher than with pure chloroform; and when respiration stopped, the blood pressure was higher after inhaling the pure than the impure drug. Furthermore, the latter caused stoppage of respiration much more quickly than the former. Pure chloroform is much more volatile than the impure, and the purer the drug the less the quantity required for anæsthesia and the less risk of that respiratory failure which the Hyderabad Commission concluded was the cause of death in chloroform administration.—*N. Y. Medical Journal.*

IMPLANTATION OF LARGE FRAGMENTS OF DECALCIFIED BONE.—A young man, suffering from chronic tubercular ostitis of the tibia, was treated by Le Dentes (*La France Medicale*) by extirpation of three inches of the tibia and fibula, and a portion of the upper surface of the diseased astragalus, replacing them by a single three inch fragment of decalcified bone from a calf. Ultimately a movable articulation upon the astragalus was established, and the patient was able to walk several miles without fatigue, his foot receiving only lateral support from a dressing containing thin boards. The bone to be used is removed from a freshly killed calf, stripped at once of its periosteum and marrow, cut into pieces of suitable size, and placed in ten per cent. hydrochloric acid for

eight days, rinsed in pure water, immersed in a sublimate solution for twenty-four hours, and then stored in iodoform and ether.

The advantage of the single fragment over Senn's "chips" is that it affords support to the member during the growth of the bone granulations. Favorable conditions are, of course, youth of the subject and the possibility of extirpating *all* the diseased tissue. It is, of course, necessary that either a thin sheath of live bone or healthy periosteum be preserved. Its greatest usefulness will be in destructive lesions and operations upon the skin; resection of small bones, the seat of tuberculosis; resection of long bones for disease tumors, and in complicated fractures; and the radical cure of pseudo-arthroses.—*Indiana Med. Journal.*

THE GRIP-LUNG.—The grip-lung, according to Elliott, has a long and very varying condition of passive blood stasis unaccompanied by râles. If resolution occurs within three or four days, it is accompanied by large mucous râles, and no time is given for the slow appearance of bronchial breathing or bronchophony; but during the long continuance of the blood stasis an exudation occurs, increasing slowly, which will give, in time, some bronchophony and bronchial breathing, but never so complete as in pneumonia. Resolution never occurs in these cases with the suddenness that characterizes it in acute pneumonia; the condition passes off as gradually as it formed. The sharp, clear cut and sudden phases of the pneumonic attack separate it clearly from the obscure, irregular and slow phases of the grip-lung. —*Weekly Medical Review.*

THE EFFECTS OF SULFONAL UPON THE CIRCULATION.—The conclusions arrived at by Dr. Sgobbo Francisco, of Naples (Annali di Neorologi, Fas. II, 1891), are:

1. That sulfonal is a good hypnotic.

2. That given in doses of 3 grams it exerts an influence upon the heart and blood vessels, reinforcing the systole and increasing the vascular tone. This action upon the blood vessels is not continuous, for after a certain time there is a dilatation, and a progressive loss of elasticity, beginning first in the vessels of the brain, then extending to the periphery.—*Jour. Nerve and Mental Disease.*

HISTOLOGICAL ALTERATIONS OF THE NERVOUS CENTRES PRODUCED BY ELECTRICAL SHOCK.—Magini, of Rome, experimented upon dogs, cats, pigeons, white mice and rabbits, employing the potential electrical apparatus of Winsurth. After examining the brain cord and peripheral nerve carefully he arrived at the following conclusions:

1. That death by electrical shock, where there is no external or appreciable internal lesion, is produced by a profound alteration taking place in the ganglion cell of the cerebro-spinal system.

2. That such ganglion cells show great changes in size, being shrivelled and atrophied, deprived of nucleus and nucleolus, and accept an intense stain.

3. That the electrical shock, oft repeated, favors diapedesis.—*Jour. Nerv. and Mental Disease.*

DECISIONS CONCERNING ACCIDENTS.—From the *New York Independent* we quote the following decisions about "accidents": In one case the sufferer claimed for compensation as provided, the principal sum insured for "the loss of two entire feet"; he had his feet still, attached to his body and uninjured, but their use was destroyed, as a consequential injury. He had been accidentally shot in the back, producing a paralysis which reduced his feet to the condition of useless appendages.

In another case compensation was claimed for "loss of both eyes." The hair splitting answer might have been that the man had not lost both eyes, for in fact he had lost by the accident only one. But the further fact was that he had only one eye to lose, having had only one when he was insured, as the company's agent was aware; so the expression "loss of both eyes" was decided to be equivalent to "entire loss of eyesight." Whether eyesight which could be lost or put in jeopardy in a single eye ought to be insured at the same rate as on the usual basis of two eyes the court did not inquire; it assumed that what the agent knew the company knew.

Accident policies properly provide against liability in case accident occurs while the party is engaged, temporarily or otherwise, in an occupation more hazardous than the one he was engaged in when insured; a bookkeeper, insured as such, of course has no right to go to repairing church steeples as an occupation. But suppose he repairs them for amusement? In a case of accidental killing while gunning, it was held that this was amusement, not "occupation," and that defense on the plea of changing occupation was not good. We recall a similar case where a man insured as a "gentleman" got hurt while working at a lathe or like implement; it was held that he was still in the "occupation" of gentleman notwithstanding. It may be well that the person who ventures to do, in an amateur or dabbling way, things which are in their nature hazardous, incurs more danger than the experienced person who does those things as his occupation. This is true of some things, and probably not true of others; for instance, the amateur steeple climber would be rather more in danger than the professional whose nerves have become accustomed, but the amateur at a circular saw is rather more careful to keep his fingers at a good distance than is the one who is "used to it."

In a case where the insured was struck and killed while hurrying across the track at a railroad station and doing his best to reach the platform, aided (or impeded) by shouts to "look out for the express," it was held that the jury might decide the question of fact whether this was negligence; moreover, that if a man of ordinary prudence would do the same in those circumstances, his death was not by a "voluntary" act of his own; moreover, that such a crossing of a track is not forbidden by the policy prohibition of "standing or walking on the roadbed or bridge of any railway."

Again, if the person injured while riding on the platform or step of a railroad car can show that by reason of the crowd on the train there was no safe place to ride, and the conductor permitted him to remain there, he is not debarred from recovery by the policy prohibition.

In a case where the insured met his death while trying to save two persons who were crossing a track it was held that this was not covered by the stipulation that the insurance "shall not extend to or cover voluntary exposure to unnecessary danger."

In a case where hernia followed the accident and a surgical operation to reduce it resulted in peritonitis and death it was held that the accident was the proximate cause of death, because the operation was necessary, death seeming to be inevitable without it.

HYDRIODIC ACID IN THE TREATMENT OF INFLUENZA.—Wm. H. Van Gieson, M.D., in a contribution to Notes on New Remedies, writes:

Owing to the prevalence of influenza at the present time, anything having a bearing upon the successful treatment of this widespread malady must be of value to the profession. Having met with most excellent results during two epidemics in the treatment of the bronchial complications accompanying this disease, the following notes have been written, with the hope that the treatment will be equally efficacious in the hands of other physicians.

One of the most distressing symptoms of this peculiar disease is the dry, racking cough which almost invariably accompanies it. In other bronchial affections the cough is often useful in removing bronchial accumulations, but it is not so in influenza. The cough is out of all proportion to the amount of inflammation of the mucous membrane. This constant mechanical irritation tends greatly to increase the congestion of the upper air passages, and greatly increases the liability to a bronchitis or subsequent pneumonia. The violent paroxysms of coughing are very exhausting, and the patient is often completely exhausted after having passed through one. Vomiting is also apt to be induced by the prolonged fits of coughing, thus tending also to weaken more the already greatly debilitated patient. After the cough has persisted for some time, the muscles of respiration become very sore and painful, and cases have frequently been seen where hernia has been produced by the cough paroxysms.

During the epidemic of 1889 I tried all the various expectorants and cough mixtures with but poor results. Some of those containing opium or its alkaloids seemed beneficial for a short time, but as soon as they were discontinued the cough returned, and in some cases remained troublesome for months after. During the last part of the epidemic of that year, I began the use of hydriodic acid in the treatment of these bronchial complications, meeting with excellent results. During the epidemic of 1890, and so far during the present one, I have used the acid most extensively, with uniformly good results. Very soon after its administration the cough loses its dry, rasping character, becoming moist, and with the paroxysms farther apart. It is very seldom that a patient is seen who has been obliged to vomit from the violence of the cough paroxysms after the acid has been administered for twenty-four hours. It has been my practice to prescribe the syrup of hydriodic acid in teaspoonful doses every two or three hours, well diluted in water, gradually increasing the interval of administration as the desired effect is obtained. The syrup has a pleasant taste, and is easy of administration, which is a valuable feature. Having tried the syrup supplied by different manufacturers, and after having on several occasions had a syrup dispensed which contained free iodine (once with nearly fatal results to the patient), I tried syrup of hydriodic acid, and in no case has it ever disappointed me—proving unalterable and permanent in composition, and satisfactory in therapeutic effect.

The acid is also beneficial in the other catarrhal complications accompanying influenza, such as coryza, catarrh of the digestive tract, etc. In fact, it seems to have a decided action upon all symptoms of the disease. The syrup can be administered plain, or in combination with most of the syrups and tinctures. The combination of the syrup with the tr. of cardamoms and codeia makes a very palatable and efficient mixture.—*Medical Age.*

ZINC GLUE FOR SURGICAL DRESSINGS AND OTHER PURPOSES.—Treutler suggests the following formula: Oxide of zinc, 10 parts; gelatine, 30 parts; glycerine, 30 parts; and water, 30 parts. This paste is thickly applied and rubbed into the muslin or gauze forming the bandage. A thinner preparation contains 20 parts of gelatine and 40 parts of water.

THE *National Medical Review* is the name of a new medical journal of which "No. 1 of Vol. I" has just made its appearance. It is edited and published by Charles H. Stowell, M.D., formerly professor of histology at the University of Michigan, founder and for several years editor of the *Microscope*, and now practicing medicine in Washington, D. C. The new journal makes a good appearance, its title page being especially attractive.

PRIMARY TUMORS OF THE HEART.—Dr. Jürgens (*Berlin. klin. Wochenschr.*) publishes four cases of primary tumor of the heart—a rare affection, in regard to which knowledge is still limited. Case 1 is that of an infant aged 10 months, in whose right auricle was found a growth about the size of a cherry. It took origin between the superior vena cava and the insertion of the anterior flap of the tricuspid valve, and on microscopical examination proved to be a simple fibroma. The endocardium of both ventricles here and there showed some fibrous thickening. No symptoms of heart disease were detected during life. Case 2 is that of a man aged 50, who, although free from heart symptoms during life, was found post-mortem to have a polypoid fibro-myxoma of his left auricle. The tumor, as large as a walnut, was attached to the middle of the anterior wall and hung down 1½ inch into the mitral orifice. Microscopical examination showed the structure to be that of a highly vascular pigmented fibro-myxoma, the pedicle containing some striated muscular fibres. Case 3 is that of a man aged 36, who, having died suddenly, was found at the necropsy to have suffered from a fibro-sarcoma of the right auricle and tricuspid valve, which caused considerable stenosis of the tricuspid orifice. No other pathological condition was discovered. Case 4 is that of a woman aged 19, who also died suddenly, and whose heart was found post-mortem to contain numerous small tumors buried in the wall of the right ventricle. These, on microscopical examination, proved to be gummata infiltrating almost the whole of the right side of the heart. The endocardium, the septum, and especially the region of the tricuspid valves, were also extensively infiltrated, the tricuspid orifice forming a rigid opening, admitting only two fingers. The walls of the arteries and of some of the veins of the right ventricle showed well-marked sclerosis, while many arteries lying in the connective tissue new growths were completely occluded.—*Supplement British Medical Journal.*

PREPARING THE SKIN FOR ANTISEPTIC OPERATIONS.—Dr. F. W. Langdon, of Cincinnati (*Lancet-Clinic*), calls attention to the value of benzine as a solvent of oily secretions in the preparation of skin areas for antiseptic operations. An agent that can penetrate and disinfect the pores and follicles of the region to be operated upon, has advantages not possessed by any of the watery solutions in common use.

DETAILS AS TO THE USE OF OINTMENTS.—There are perhaps few subjects in respect to which custom hangs on us with a more heavy weight than in the directions which we give to our patients as to the use of ointments. In nineteen cases out of twenty the formula is, "Take the mixture three times a day, and apply the ointment at bedtime." Now in a large number of cases the direction ought to be three times a day, at least, for the ointment also. Further, the application ought to be each time a definite inunction, occupying a few minutes for each spot, and not a mere anointing. It is astonishing what may be done in many skin diseases by appropriate ointments used in this way. To order simply an anointing on going to bed is to do little more than nothing. Nor is it much better to apply the salve on lint; what is needed is patient and repeated inunction. If the patient will take the trouble three times a day to undress before a warm fire and take his time to a patient inunction, he may in many cases dispense with the disagreeable condition of keeping the skin always greasy.

I am in the habit of employing these frequent inunctions not only in cases curable by mercurial ointments, but in those also such as psoriasis, requiring tar or chrysophanic acid. In a little girl now under treatment for psoriasis, arsenic definitely disagreed, and the spots persisted. I disused the arsenic, made the chrysophanic acid ointment stronger, and insisted upon the nurse using it by inunction

three times a day. The result was that the health improved, and the spots rapidly disappeared.

MERCURIAL LOTIONS SOMETIMES PREFERABLE TO OINTMENTS.—A gentleman wrote to me: "You may remember my having called on you two or three months ago on account of eczema. Your first prescription not having eradicated it, the second, bi-chloride of mercury, has settled the matter, for it is gone."

As it is an unusual thing to cure eczema with the bi-chloride, I took the trouble to look up my notes of the case, and found that my patient was an old gentleman of seventy, who had consulted me on Sept. 14th, for what I then called "Eczemaporrigo of the chin, with a honeyed crust." He was wearing his beard, and the hairs were matted together. It had been present then two months, and had persisted in spite of treatment. I prescribed for him, in the first instance, an ointment containing tar and the white precipitate. Two months later, on Nov. 10th, I found him but little better, and noted that the eruption was still moist and distinctly pustular. It was then that I prescribed the bi-chloride wash which rapidly effected a cure. The ingredients of the latter were as follows: Four grains of bi-chloride of mercury, two ounces of spirits of wine, half an ounce of glycerine, and twelve ounces of rose water. The directions were to bathe the roots of the hair freely night and morning, and, after drying, to apply the ointment. The ointment was the same which had been used before alone, and which did not cure. This case proves that in some instances solutions of mercury are more efficient in stopping the inflammatory process than are ointments.

THE TREATMENT OF GONORRHŒA.—My treatment of gonorrhœa in all stages has for long been very monotonous. Almost without regard to stage or degree of severity, I prescribe the same remedies. I have long ago laid aside the traditions of my student days which taught that salines only should be used in the acute stages, and that abortive plans were dangerous. I always use abortive measures, and mostly, I believe, succeed. At any rate, I never encounter ill consequences, and complications are rare. My prescription is a partnership of three different remedies, and it is, I believe, important that they should all be used. First an injection of solution of chloride of zinc, two grains to the ounce; next sandal-wood oil capsules, and, lastly, a purgative night dose with bromide of potassium. The injection is used three or four times a day, the capsules (ten or twenty minims) taken three times a day. The ingredients of the night-dose are three drachms of Epsom salts, and half a drachm of bromide of potassium. It is, I believe, the action of the last named in preventing congestion of the parts which makes the abortive measures safe. Moderate purgation and entire abstinence from stimulants are essential. If the case is very acute and attended by swelling of the corpus spongiosum, I sometimes prescribe tartar emetic or tincture of aconite, but it is very seldom indeed that these are necessary. If the patient be well purged there is no risk whatever in an abortive treatment from the day that he comes under treatment. The risk of orchitis, prostatitis, cystitis, etc., comes in cases which have been allowed to develope rather than in those treated abortively. I should as soon think of delaying to use local measures in gonorrhœa as I should in purulent ophthalmia.

SALOL AND ARSENITE OF COPPER IN THE DIARRHŒA OF CHILDREN.—Mensi (Riv. gen. Ital. clin. Med., Sept. 15, 1891) speaks most highly of the efficacy of salol in the acute or chronic diarrhœas of children. According to his experience, in the treatment of twenty-seven cases he finds that the drug in a relatively short time arrests the intestinal flux, calms the colic and tenesmus, and restores the normal functions of the bowel. The medicament is well borne in daily dose of twenty-five or fifty c. g. to two grams, according to the age and gravity of the case. It does not irritate the stomach, and produces no toxic symptoms. On the other hand, he has found that arsenite of copper possesses no immediate advantages in the treatment of diarrhœa, and the results obtained have no superiority over those effected by other drugs.—*Medical Age.*

PEROXIDE OF HYDROGEN AS A DISINFECTANT OF WATER.—Dr. Altehoefer, after giving references to the literature of the subject, gives his own researches on the disinfective power af $H_2 O_2$ dissolved in water. He finds that the addition of 1 per 1,000 to ordinary drinking water, to drinking water containing sewage, or to water containing typhoid bacillus or cholera bacillus, is quite sufficient to destroy the various saprophytic and pathogenic organisms contained under these conditions, if it is allowed to act for a period of twenty-four hours. It is specially valuable for the disinfection of drinking water because it does not affect the taste, does not alter the color, and in the proportion mentioned is perfectly innocuous. As regards cost, he calculates that sufficient drinking water—say 10 litres— may be sterilized by means of $H_2 O_2$ at a cost of about 2d. per diem.—*Quarterly Therapeutic Review.*

THE PHENOMENA OF RANCIDIFICATION.—M. Ritsert has published in the *Revue Scientifique* a very interesting paper describing the experiments made by him to solve the question of the rancidification of fats. He first directed his attention to the microörganisms always present in fats. Isolating these and sowing them upon sterilized fats, he found that no acids were produced, and further that subsequent enumeration of microörganisms demonstrated that these not only did not grow and increase in numbers, but that most of them actually perished when placed in contact with sterilized fats. The inoculation of sterilized fat with rancid fat produced the same negative results. These experiments eliminated the microbian theory of the origin of rancidity. On exposing the inoculated fats to the direct sunlight M. Ritsert noticed that the bacteria, etc., died more rapidly than when the direct light was excluded, but at the same time the fat became rapidly rancid. Light, therefore, seemed to be a direct agent in rancidification. This point fixed, the experimenter next turned his attention to the atmosphere, or the gases which constitute it, and investigated whether it or they played any rôle in the phenomenon. The net results of his experiments proved that light without air, and air without light, alike are powerless to produce rancidification, but that the union of the two factors, light and air, is necessary for the phenomenon. Nitrogen and oxygen alone, either or both of them have no effect *in the dark* upon fats, and nitrogen alone none in the light, but oxygen and light effect rancidification rapidly. Rancidity, then, is an oxidation, but one that is never produced in the absence of light. Hence, fats kept in absolute darkness will not become rancid.—*National Druggist.*

FACIAL SPASMS CURED BY INTRANASAL TREATMENT.—Dr. Felix Peltesohn (*Berlin. klin. Wochenschr.*) believes that it is of great importance to bear in mind the possibility of a nasal origin in cases of convulsive tic, and to direct the treatment accordingly. In proof of this he records the following case: A young man, aged twenty, otherwise healthy, had since the age of fourteen been affected with a twitching of the lower eyelid on the left side. The twitching used to get better and worse without apparent cause, and at times would disappear altogether. A short time previous to coming under the author's care the spasmodic affection had extended to the

whole of the left side of the face. The spasm was unattended with pain, but was excessively annoying to the patient, reducing him almost to a state of desperation. It did not cease even in the night, so that it frequently woke him from sleep. He complained also of a stoppage in the nose, had a reddish discharge from the nostril, and a nasal twang of voice. It was these latter symptoms which caused him to seek Dr. Peltesohn's advice. Rhinoscopic examination revealed a considerable swelling of the anterior end of the left inferior turbinated body. The surface of the tumor was covered with small elevations, like a raspberry, and pressure with a probe caused slight bleeding. When the tumor or other part of the mucous membrane was irritated with the probe it did not set up spasm, nor was the spasm relieved by cocainization of the mucous membrane. The tumor was removed by means of the galvano-caustic snare. From that day the spasmodic affection of the face ceased completely. The author has frequently seen the patient during the nine months which have elapsed since the operation, and there has not been the slightest return of the spasm.—*Supplement British Medical Journal.*

PERIPHERAL NEURITIS IN CANCER.—Dr. Auché concludes a work on the existence of neuritis in cancerous subjects, in the *Revue de Médecine*, as follows: 1. Neuritis can develop, and in fact often does develop, in the course and under the sole influence of carcinomatous affections. 2. The situation of the neuritis is very variable, but in general the nerves are the more altered the farther they are away from the nerve-centres. 3. These neurites are in relation with clinical symptoms which one must know to search for in such cases. 4. They are probably due to nutritive troubles and to alterations of the fluids and tissues which take place in the cachectic period of cancerous tumors.

ACTION OF YEAST ON TYPHOID BACILLI.—Recently Dr. Springthorpe, at a meeting of the Victoria Branch of the British Medical Association, communicated a description of M. de Bavay's results of a series of observations and experiments on the saccharomyces, and their relation to typhoid bacilli. These saccharomyces were obtained from chyle which had escaped from the thoracic duct through an ulceration, and which appeared to possess very strong antiseptic and deodorising properties. After determining that the typhoid bacillus grew best in broth, and that milk was not a specially good medium unless it could be previously peptonized by other materials, M. de Bavay carried on a series of experiments to prove that yeast had the power of interfering with the growth of the typhoid bacillus when the two were cultivated *in vitro*. He found that the typhoid bacillus growing in an alkaline medium was much more virulent than that organism growing in an acid medium. He explains this on the assumption that the poison secreted by the organism is immediately precipitated in the alkaline medium, leaving the bacillus free to act, whilst in the case of the acid medium the poison is not precipitated, and eventually accumulates to such a degree that the organism which secretes it is itself poisoned. He found also that if he retained the sediment from an alkaline solution on a filter, and then dissolved it in a weak acid, he obtained an exceedingly toxic substance. From this he argues that as yeast is able to pass through the intestine comparatively unchanged, and as it develops a considerable quantity of acid in its growth, it should, if introduced into the intestinal canal, maintain a certain acidity in the contents, and so prevent the precipitation and storing up of the typhoid poison—a storing up which takes place when the secretion is allowed to remain alkaline. He also holds that if the food taken by the patient be saturated with yeast—which is a harmless organism—the typhoid bacillus can no longer develop in it, and is therefore very soon starved out, and he maintains that in consequence of this slow absorption of the acid into the system a kind of self-protective inoculation takes place; in fact, after injecting a mixture of yeast and typhoid bacilli, guinea-pigs which had shown slight signs of intoxication but had recovered were proof against large toxic doses of the poison. He describes an organism found in certain cases resembling typhoid which secretes a far more poisonous compound than does the typhoid bacillus itself, which, however, it resembles in many respects, although it develops rapidly on potato, forming an abundant wax-like covering. The colonies on gelatine are exceedingly minute; the bacilli are like those of typhoid but a little stouter; they are arranged in chains of two, three, and four, and have a serpentine motion across the field of the microscope; they stain readily, and are then very similar to the bacilli of septicæmia. Here, however, the poison appeared to belong to the class of albumoses, whilst the typhoid poison he considers to be a ptomaine. His conclusions are 1, that the action of yeast in the treatment of typhoid fever is principally due to the power which it has of secreting an acid, and of doing this over and over again, by which means it is able to render acid the contents of the intestines; 2, that when such an acid reaction exists, the poison secreted by the germ reacts upon the germs themselves and stops their growth; 3, that the action of yeast on the poison of typhoid differs according to whether it is pure or contaminated by bacteria; 4, that liquids impregnated with yeast are in a great measure protected against the depredations of typhoid bacilli, especially if such a liquid contains a fermentable sugar; 5, that these properties of yeast are not confined to one variety, but that they increase or diminish according to the power of assimilation and acid secretions of different varieties. Further, he has found that the typhoid bacilli, after repeated growth in peptonized broth, produce less poison, as it is necessary to use larger doses to produce the same effect.—*Supplement Brit. Med. Jour.*

THE LAW OF PERIODICAL FUNCTION IN WOMEN.—Ott (*Wiener Med. Presse*) reports some observations, not exclusively upon menstruation, but upon the various vital processes occurring in women during the period of generative activity. These processes correspond in time to the hæmorrhage, are associated conditions, with a dependent relation to it. Observations upon temperature, pulse and blood pressure indicated that vital activity attained its maximum preceding the menstrual period, and declined at its commencement or immediately before. Sphygmographic tracings, muscle strength and excretion of urea suffer similar variations Observations were made at a certain hour each morning during prolonged periods, sometimes extending into the menstrual periods, upon heat radiation, muscle strength, pulmonary capacity, inspiratory and expiratory force, the tendon reflexes, in healthy women placed under the same condition; and a physiological functional periodicity of the female organism was demonstrated. To establish the connection between menstruation and this periodicity of function, it is necessary to determine if the rhythmical variations are independent of menstruation. A large number of observations made by Dr. Schichareff, under the guidance of Ott, upon pulse, temperature and blood pressure in girls between the ages of 8 and 13, and in women between the ages of 58 and 80 years, showed that no such periodical variations of physiological functions occur in females during the periods in which they are not capable of conceiving, and in which they do not menstruate.

BEER-DRINKING IN ITS RELATION TO HEART DISEASE.—In Munich, where the average amount of beer annually consumed reaches 565 litres *per capita*, not only is heart disease

very prevalent, but the duration of life among those engaged in the brewing trade is very much less than that attained by those not so engaged. This fact is shown by the average duration of life among the general population (53.5 years), those who keep alehouses (51.35 years), and the brewers (42.33 years).—*Blätter für klin. Hydrotherapie*, No. 4, 1891.

Nasal Polypus and Hysteria.—Dr. Marcel relates the case of an hysterical girl of 23, who for seven years had suffered from frequent attacks of convulsions with loss of consciousness. The convulsive seizures were preceded by an aura starting like an itching or tickling in one side of the nose, and extending to the eyelids, and thence to the throat, where it caused a sense of suffocation. A polypus was discovered in the corresponding nasal fossa, and upon its removal the attacks ceased.—*Medezina.*

Leucorrhœa is, according to Dr. Louis Bauer, often due solely to constipation, hence clearance of the bowels of their fæcal contents is in many cases the chief and most effective treatment of that troublesome disorder.

Criticism on Some of the Lesser Gynecological Manipulations.—Croom (*Edin. Med. J.*) says three factors seem at work in modifying our opinions very considerably with regard to many of the minor gynecological operations and appliances which have been in constant use. These three factors are: 1, The improvement in and education of practitioners in the simple manual examination of the pelvic organs; 2, an improved and revised pathology of the intra-vaginal portion of the cervix; and 3, perhaps especially the increased knowledge which abdominal section has thrown upon the contents of the pelvis. The fact has been forced upon the author that a large number of cases where abdominal operations have become imperative have been distinctly traceable to interference, more or less marked, with the uterus. He condemns in unmeasured terms, the speculum, the sound, the intra-uterine stem. He extols dilatation of the cervix and curetting.

He calls attention to the three following rules:

1. That the diagnosis of all pelvic and most pelvi-abdominal conditions should be made slowly and gently with the unaided hands, and upon the examination thus made the practitioner should train himself to rely.

2. That no mechanical aids to sight or touch should be employed, except under exceptional circumstances.

3. That as a large proportion of the risks and accidents of *minor* gynecological operations are due to a want of appreciation on the part of the physician of the condition of the uterine appendages, no operation, however trivial, should be undertaken until their state and relations have been ascertained with as much accuracy as possible.

Massage for Constipation of Infants.—M. Carnitsky advises abdominal massage as the best treatment for constipation in infants. The skin should be smeared with vaseline in order to avoid irritating it and the right and left flanks should be the parts selected for the principal treatment, because the large intestine is the sluggish part in infants. During the séance, which should last four or five minutes, it is best to nurse the child so as to keep it quiet and avoid contraction of the abdominal muscles.—*Journal de la Santé.*

Enteric Fever in an Infant Nine Months Old.—Fuller (*Lancet*, No. 3548, p. 1038) has recorded the fatal case of an infant, nine months old, that presented manifestations of irritability and dulness, with diarrhœa, tympanites, and elevation of temperature. At the autopsy, though the spleen was not enlarged, Peyer's patches were found swollen above the surface of the mucous membrane, some of the lower ones beginning to ulcerate. The adjacent intestine was injected. The mesenteric glands were enlarged and the solitary glands of the cæcum were abnormally prominent. In the same house in which the infant lived, an older child of eighteen months, as well as a woman, presented symptoms similar to those of the infant.

Guarana in Leucorrhœa—Pharmacology of the Newer Materia Medica.—A respectable married lady (Mrs. A. E., between twenty-five and thirty years of age), having been for some two years on the decline with uterine and vaginal troubles, who had been treated and had the advantage of the best medical talent, but was relieved only temporarily at times, called on me for treatment, and having prescribed for her, without anticipating anything very serious, or learning all the facts, she got but partial relief. I then made a careful examination, and learned all, as follows: Leucorrhœa of long standing, vesicular vaginitis, very sensitive, painfully contracted, so that a small tube of syringe gave great pain inserted; perfectly impotent, and incapacitated from enjoying the marital relations, etc. Prescribed guarana internally, and as a local application (after cleansing vagina with castile soap and warm water).

℞ Salicylic acid, gr. xx
Glycerin, ℥j, ♏.

—*Archiv. of Gynecology.*

The *Bacteriological World* has been removed from the State University at Columbia, Mo., to Battle Creek, Mich., where its editor, Dr. Paquin, has assumed control of the new laboratory of hygiene at the Battle Creek Sanitarium.

Immunity and Infection.—Dr. A. C. Abbott, in an interesting paper in the *Medical News* on some of the more important contributions to medical literature on the subject of immunity, describes briefly the work recently done by several experimenters. As the result of this work, he offers the following as the present state of our knowledge of immunity and infection:

Of the hypotheses that exist for the explanation of immunity, that which assumes acquired immunity to be due to reactive changes on the part of the tissues has received the greatest support. Immunity is most frequently seen to follow the introduction into the body of the products of growth of bacteria that in some way or other have been modified. This modification may be artificially produced from the products of virulent organisms, and then introduced into the tissues of the animal; or the organisms themselves may be so treated that they are no longer virulent, so that when introduced into the body of the animal they eliminate poisons of a much less vigorous nature than is the case when they possess their full virulence.

Immunity following the introduction of bacterial products into the tissues is not the result of the permanent presence of these substances *per se* in the tissues, or to a tolerance acquired by the tissues to the poison, but is probably due to the formation in the tissues of another body that acts as an antidote to the poisonous substance. This protecting proteid that is eliminated by the cells of the tissues need not of necessity be antagonistic to the life of the organisms themselves, but in some cases must be looked upon more as an antidote to their poisonous products.

In the serum of the normal circulating blood of many animals there exists a body that is capable, outside of the body, of rendering inert bacteria that, if introduced into the body of the animal, would prove infective.

In many instances, infection may be looked upon as a contest between the bacteria and the tissues, carried on on the part of the former by the aid of the poisonous products of their growth, and resisted by the latter through the agency

of proteid bodies normally present in their integral cells. When infection occurs it may be explained either by the excess of vigor of the bacterial products over the antidotal or protective proteids eliminated by the tissues, or to some cause that has interfered with the normal activity and production of these bodies by the tissues.

Phagocytosis, though frequently seen, is not essential to the existence of immunity, but is more probably a secondary process; the bacteria being taken up by the leucocytes only after having been rendered inert through the normal germicidal activity of the serum of the blood and other fluids of the body.

NECROLOGY.

MR. BERKELEY HILL, of London, died January 7, aged 58 years. He was in the first rank of the English syphilographers, occupying in London a position comparable to that so long held by Ricord in Paris. He was surgeon to University, College and Lock Hospitals, Dean of the medical faculty in the former; member of Council in Royal College of Surgeons of England, and in 1888, Hunterian Professor of Surgery and Pathology in that college, when he chose endoscopy for the subject of the year. He died from cancer of the liver, after a lingering and painful illness.

DR. SAMUEL HARD CASE, of Oneonto, N. Y., who died January 18, 1892, was one of the most eminent citizens as well as the senior practitioner of Otsego County. He was active in his calling for over half a century; he was the promoter of public improvements, and served in various local offices. He was a graduate of the Fairfield Medical College in 1829, and at the time of his death had attained the age of 83 years.

BOOK REVIEWS.

AGE OF DOMESTIC ANIMALS. A treatise on the dentition of the horse, ox, sheep, hog and dog. F. A. Davis, Philadelphia, Publisher. Price $1.75.

This convenient volume is well illustrated and presents a careful compilation of all that has been written on this subject from the earliest times. The information given is of very great practical value to physicians.

DISEASES OF THE SKIN. By W. ALLEN JAMIESON, M.D. Third edition. Revised and enlarged, with wood cut and colored illustrations. Philadelphia: Lea Brothers & Co., 1892.

In common with other special departments in medicine, that of dermatology is rapidly approaching an exactness in diagnosis and treatment which fairly places it at the front among the specialties. This volume by Dr. Jamieson is a valuable one for practitioners and students, as it is both full and concise without being unwieldy and voluminous.

A SYSTEM OF PRACTICAL THERAPEUTICS. Edited by HOBART AMORY HARE, M.D., assisted by WALTER CHRISTIE, M.D.

Vol. 1 opens very appropriately with some general therapeutic considerations embodying methods, dosage, state of the patient, and drug combinations by H. C. Wood, M.D. The next theme is that of prescription writing, and combination of drugs, by J. P. Remington, Ph.M. Electro-therapeutics is a well illustrated chapter by A. D. Rockwell, M.D. This is followed by an excellent chapter on Swedish Movements and Massage, by Benj. Lee, M.D., and so on as we look through the two portly volumes just issued. We find chapter after chapter on all subjects pertaining to the treatment of diseases and injuries. Each written by an acknowledged authority. An abstract of which, be it ever so meagre, would fail to do justice to many of the well written articles, making up this valuable system of practical therapeutics.

MISCELLANY.

MEDICAL SOCIETY OF WEST VIRGINIA.—Annual meeting at Clarksburg, West Virginia, in May, 1892. C. Shriver, M.D., Prest., Bethany, West Virginia; D. Mayer, M.D., Secretary, Charleston, West Virginia.

N. C. O. MEDICAL SOCIETY.—Eleventh annual meeting of this society will meet at Mansfield, Ohio, Friday, March 25, 1892, in probate court room. The following papers will be read:

President's address.
Constipation—Its Causes, Consequences and Treatment, Geo. P. Sattler, M.D., Pavonia, Ohio.
Diphtheria—Etiology, A. V. Patterson, Mansfield, Ohio.
Diphtheria—Treatment, H. B. Gibbon, M.D., Tiffin, Ohio.
Differential diagnosis between Croupous and Diphtheritic Membranes, J. W. Craig, M.D., Mansfield, Ohio.
To Open Discussion, F. C. Larimore, Mt. Vernon, Ohio.

OFFICIAL LIST OF CHANGES in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from March 5, 1892, to March 11, 1892.

Major Alfred A. Woodhull, Surgeon U. S. A., having completed the duties assigned him by Par. 4, S. O. 303, A. G. O., December 30, 1891, will proceed from New York City to Hot Springs, Ark., and take station thereat as surgeon in charge of the Army and Navy General Hospital.

Col. Basil Norris, Surgeon U. S. A., retirement from active service this date, by operation of law, is announced. By direction of the President, Washington, March 9, 1892.

First Lieut. Philip G. Wales, Asst. Surgeon U. S. A., is relieved from further duty at Ft. Apache, Ariz., and will report in person to the commanding officer, Ft. Bowie, Ariz., for duty at that station, relieving First Lieut. William N. Suter, Asst. Surgeon U. S. A.

A board of medical officers, to consist of: Major David L. Huntington, Surgeon; Capt. Henry S. Turrill, Asst. Surgeon; Capt. Henry S. Kilbourne, Asst. Surgeon; Capt. Walter W. R. Fisher, Asst. Surgeon, is constituted, to meet in New York City, on the 1st day of April, 1892, or as soon thereafter as practicable, for the examination of candidates for admission to the Medical Corps of the Army.

Capt. Jefferson R. Kean, Asst. Surgeon U. S. A., is relieved from duty at Ft. Robinson, Neb., and ordered to St. Francis Bks., Mo., for duty, not later than March 25, 1892, relieving Major David L. Huntington, Surgeon U. S. A. Major Huntington, upon being relieved by Capt. Kean, will proceed to New York City, for duty in connection with the Army Medical Board.

Capt. Marlborough C. Wyeth, Asst. Surgeon U. S. A., is relieved from further duty at Ft. McIntosh, Tex., and ordered to Ft. Supply, Ind. Ter., upon the expiration of his present sick leave of absence.

Capt. Marcus E. Taylor, Asst. Surgeon U. S. A., granted leave of absence for six months, on surgeon's certificate of disability.

OFFICIAL LIST OF CHANGES in the Medical Corps of the U. S. Navy, for the Week Ending March 12, 1892.

Asst. Surgeon F. B. Braithwaite, from hospital, Chelsea, and to the U. S. S. "Fern."

Asst. Surgeon M. F. Gates, from the U. S. S. "Fern," and granted two months' leave.

Asst. Surgeon Henry La Motte, ordered to the U. S. receiving ship "Vermont," at New York.

Asst. Surgeon L. L. von Wedekind, from the U. S. S. "Vermont," and granted three months' leave.

Medical Inspector E. Kershner's orders to the U. S. S. "San Francisco" are revoked.

Medical Inspector Wm. K. Van Reypen, detached as assistant to Bureau Medicine and Surgery, and to the U. S. S. "San Francisco."

P. A. Surgeon J. D. Gatewood, ordered to the U. S. S. "Dolphin."

Asst. Surgeon E. R. Stitt, ordered to the Naval Hospital, Philadelphia, Pa.